HYGEIA

THE HEALTH MAGAZINE

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WHO'S WHO IN OCTOBER ISSUE

Michael Greenan

Her first work of sculpture

HELEN SHAW THORNGATE writes on the school child from the maternal point of view. ANNA DEE WEAVER had her training in child care at the Merrill Palmer Nursery School in Detroit. DR. D. F. SMILEY is medical adviser at Cornell University. WILLIAM M. GARDNER, D.D.S., continues his article on mouth hygiene and care of the teeth.

DR. J. P. SIMONDS is professor of pathology of Northwestern University Medical School. DR. MAX SEHAM has been making a special study of fatigue in children. KATHARINE DANIELS is principal of schools in Newton, Mass. IRENE HUME TAYLOR, a frequent contributor to HYGEIA, has been a teacher of home economics.

MARIE B. RYAN is connected with the physical education department of Iowa Wesleyan College. GRACE MARIAN SMITH concludes her series on kitchen sanitation in the city home. She is to write other articles for farm women. DR. BELLE S. MOONEY is a writer on health topics.

DR. SMILEY BLANTON and MARGARET GRAY BLANTON are connected with the child guidance clinic of Minneapolis, of which Dr. Blanton is the director. ISABEL P. HAGGERTY, teacher in the public schools of Passaic, N. J., contributes an article that was read at the last American Health Congress. HELEN SEAMAN is a former teacher of nature study and an advanced student in health education. ELIZABETH BLAINE JENKINS writes on health topics for children.

Scheduled for November

THE SQUARE MEAL
By R. H. A. Plimmer and Violet G. Plimmer, University of London.

CITIZEN OR CRIMINAL?
By L. B. McBrayer and Theresa Dansdill.

HAZARDS IN THE HOME
By A. A. Mowbray, National Safety Council.

CONTENTS

Educational Number

COVER—SCHOOL DAYS
Mae Julia Johnson — PAGE

FRONTISPIECE—HEROES OF MEDICINE 550
VII. John Hunter

MY SON GOES TO KINDERGARTEN 551
Helen Shaw Thorngate

CHILDHOOD'S ENEMY—THE TEASE 553
Anna Dee Weaver

THE HEALTH OF YOUR BOY IN COLLEGE 554
D. F. Smiley

LAUGHTER AND HEALTH 558
Helen Davis

COMMON SENSE IN MOUTH HYGIENE—PART II ... 559
William M. Gardner

FRONTIERS OF MEDICINE 562
J. P. Simonds

MOTHER AND BABE, COMPANIONS AT PLAY 566

REST AND SLEEP 567
Max Seham

BRINGING NEWTON CHILDREN UP TO NORMAL WEIGHT 569
Katharine Daniels

THE RURAL SCHOOL LUNCH 573
Irene Hume Taylor

CHARTING THE DAY FOR THE RUNABOUT CHILD ... 574

A COLLEGE TRAINING IN HEALTH 575
Marie B. Ryan

SANITATION IN THE KITCHEN—PART II 579
Grace Marian Smith

A CHILD IS TO BE BORN—VI. THE CLOTHING OF THE EXPECTANT MOTHER 581
Belle S. Mooney

TRAINING THE CHILD TO OBEY—III. DISCIPLINE THROUGH PUNISHMENT 583
Smiley Blanton and Margaret Gray Blanton

LINKING SCHOOL AND HOME 587
Isabel P. Haggerty

HEALTH PHOTOS 590

PLAIN FACTS ABOUT HEALTH AND DISEASE:
Health News of the Month 592
The Nurse in Prenatal Care 593
A Nebraska Experiment in School Health 593
Experimentation on Animals 594
One Hundred Years or Over 595

THE SUN AND THE BUTTERCUP 596
Helen Seaman

THE SCHOOLROOM IMPS 597
Elizabeth Blaine Jenkins

BOOK REVIEWS 601

NEWS AND VIEWS 602

QUESTIONS AND ANSWERS 606

Contributions to HYGEIA *are considered, and, if accepted, paid for. Stamps for the return of unaccepted manuscripts should be enclosed. All communications should be addressed to* HYGEIA, *535 North Dearborn Street, Chicago, Illinois.*

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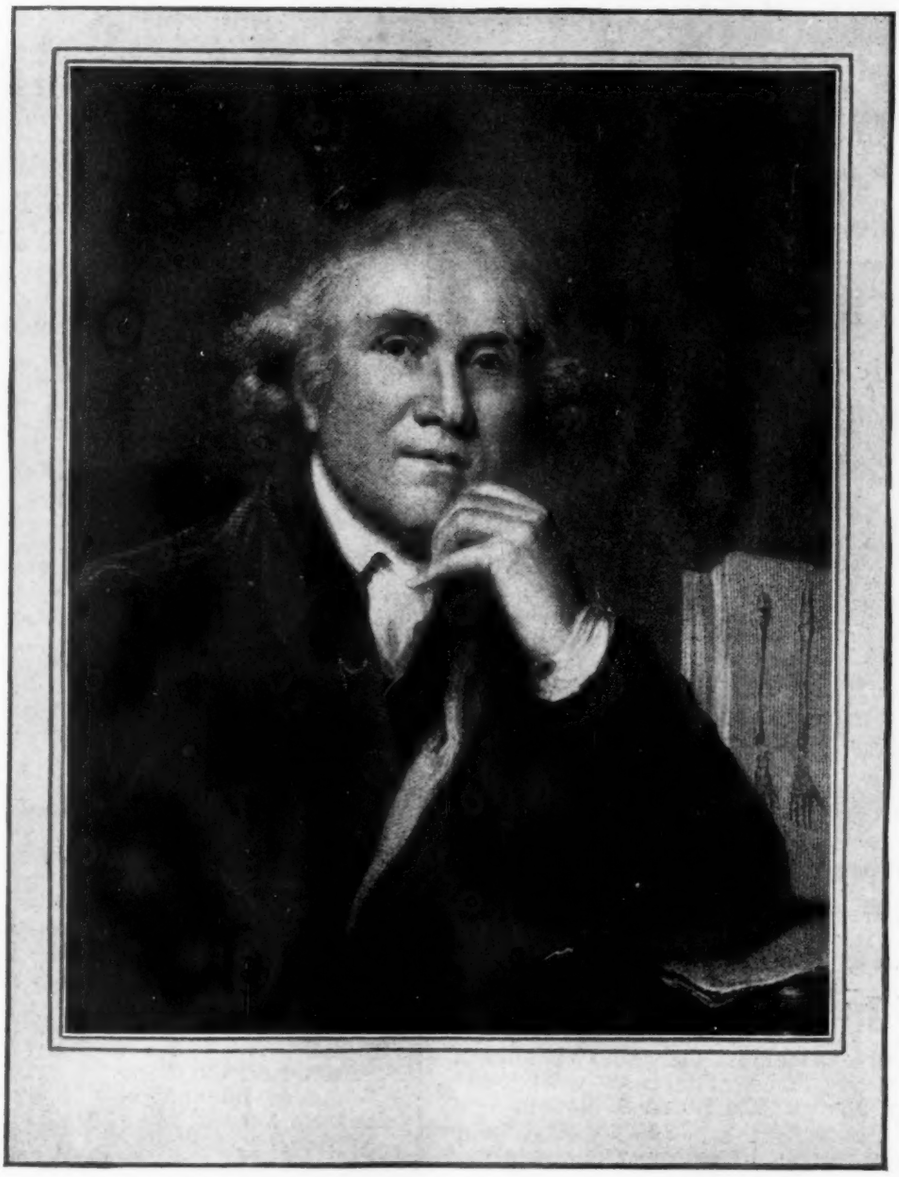


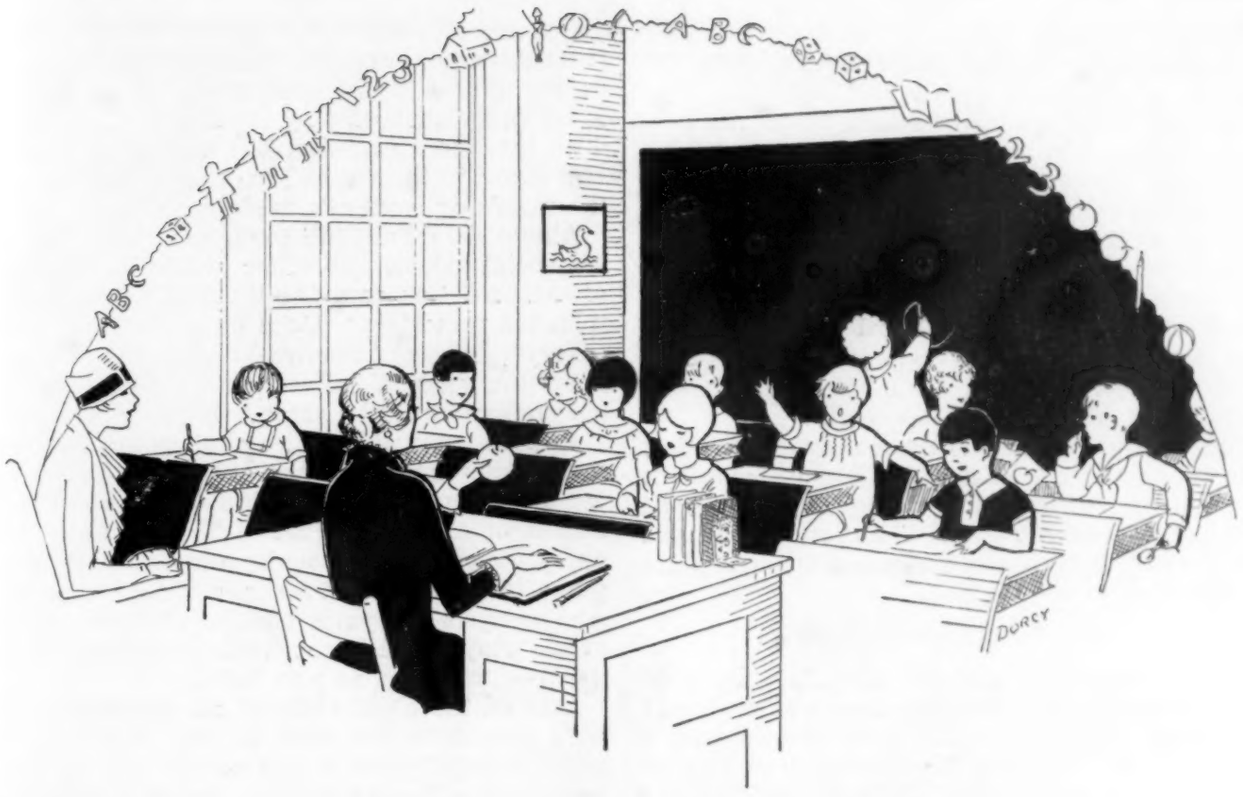
HEROES OF MEDICINE

VII. John Hunter

JOHN HUNTER ranks with Paré and Lister as one of the three greatest surgeons of all time. Born in Scotland in 1728, he came at the age of 20 to London, where he studied under his brother and afterward practiced.

While serving as a staff surgeon in a military expedition he acquired the knowledge of and skill in treating gunshot wounds for which he is famous. The results of this experience and of his studies of inflammation and the surgical diseases of the vascular system, he published in his "Treatise on the Blood, Inflammation and Gun Shot Wounds."

Hunter was the founder of experimental and surgical pathology and a pioneer in comparative physiology and experimental morphology. He was the first to study the teeth in a scientific manner. He died in 1793.



My Son Goes to Kindergarten

By Helen Shaw Thorngate

MY SMALL son is embarked on the long trail that leads to an education. The path is now rosy with play, but I know it will have many turns, stretches of sun with occasional patches of shadow, and as it advances, many intriguing by-paths to lend greater interest and zest to the quest for knowledge. God grant that the road, however long, may broaden into the sunny fields of usefulness rather than stop abruptly to leave him wandering discontentedly in the desert of doubt and egoism.

As is that of every mother, my great desire is to go with him along the absorbing path and to watch him stretch his arms toward the sun and see the world again through his wondering eyes. But this is impossible with the scores of interests claiming a housewife's attention. Still there must be ways in which I can make his school life more attractive by leveling a few of the ruts and by keeping the road from seeming long and gray and dusty to his impatient feet.

I visited kindergarten the other day. I went not merely because I belong to the patrons' association and recognize it as my duty to go, but because I could not resist beholding my darling in his new setting.

"And how does our Jimmy take to school?" was his daddy's first question that night.

"Oh, you should have seen him," fond mother replied. "He was the duckiest thing! He was so interested in it all and wept when he could not sit next to the teacher. And that little green suit of his! There is no denying it; he was certainly the cutest, brightest and most adorable infant in the room."

"Hm-m-m," said the daddy, and that was all. But that was enough to set me to thinking, with the result that the surprised kindergarten teacher placed a chair for me the second time, only this time instead of a fatuous admirer of her offspring, the tight lips proclaimed the struggle of one determined to view proceedings with the cold, impartial eyes of an outsider.

The visit was a revelation, though I must admit a blow to my complacency. It was of so much value to me that I plead with all mothers to go and do likewise. Go to study your child from the teacher's standpoint. Find, if you can, the points that keep him from receiving the fullest value from his work and from enjoying the social contact of being with other children of his own age. Profit by this knowledge in your home training, and all along the road, through grades, high school and in all his social

relations he will reap the blessing of your understanding. Such a little thing to mean so much!

In your home the child seems physically perfect. Watch him as he sits with others of his own age. Does he sit too quietly? Is there a lack of luster in his eyes? Had you ever noticed that he keeps his mouth slightly open? Is he inattentive? Perhaps he does not always hear the teacher's low commands. When he sucked his thumb in moments of abstraction at home you thought it rather sweet. Does it look so now? Is he inclined to move quickly and nervously? Does he cry too easily?

Slight physical defects these may be, but they are worth prompt attention. Tonsils, adenoids or undernourishment may be behind these signs and perhaps more careful attention to food and sleep will help the child assume his proper place in the class.

Observe His Mental Attitude

Now observe his mental attitude. Does he pay attention to what the teacher is doing? Mine did not, and we are now launched on a campaign of assisting him along that line at home. I had not realized until the enlightening visit that he is more careless than other children. Perhaps your child lacks confidence and is eternally saying the minute a task is laid out, "I can't do that." Maybe he lacks sustained interest—starts his flower or fan, has a little difficulty, drops it and goes to something else.

Does he demand the teacher's attention at every turn or does he quietly finish his task? Does he dash at his manufacture of a flower without listening to the teacher's direction? Does he answer all the questions before the other children have a chance? This is an annoying habit that many bright children have all through their school life.

Does he obey promptly? What seems of little consequence at home becomes a serious defect when the child is one of a group. Perhaps he deliberately disobeys. There was one whiney child in the class I watched whose mother I did so wish could have seen her as a discordant note. She would not rest, I am sure, until she had corrected this unpleasant habit to the far-reaching benefit of the small daughter, otherwise so adorable. Is your child too shy to fit in? Does he talk too loud?

My child, I could not help but notice, was handicapped by a lack of feeling for rhythm. His motions were awkward and his skipping a joke. Of course he will gradually learn without my assistance, but a little emphasis at home will help the teacher and increase his own pleasure. Perhaps your child does not catch on to the tunes of the songs readily. Alas, how many children get the idea that they cannot sing and refuse to try, because the teacher has not had time to help them individually.

Dozens of other little points of divergence from the normal or the ideal will come to light in any group of children, things slight enough to be easily overcome by intelligent cooperation with teacher and child, but defects that grow and stand in the way of happiness and later of the man's or woman's usefulness.

Above all, do not fail to observe your child in his social relation to other children. Does he always insist on carrying the flag? Is he selfish with his materials? Does he grab things from others? Is he apt to crowd and push? Does he show the germ of becoming a bully? Does he get mad and quit the game? Is he a good sport?

Perhaps you will notice that he prefers solitary games and does not enter into the recess frolic of his playmates. Is he oversensitive to slights or childish gibes? Is he too bashful to enjoy the playing? Does he play fair? Does the game lose its interest for him if he is not "it"? An analysis of your child's attitude toward group play and his cooperation and spirit will be most valuable to you both.

One of the chief ends of all education is to fit a person to live with others. The beloved, outstanding figures in any community are most likely to be those who have made a success of the art of cooperating with other people, who know when and how to yield gracefully, are gracious to all, understand the value of teamwork, and most of all are able to submerge themselves in the interest of the group.

His Social Tendencies

An unpleasant child in school and home is destined to suffer poignantly, receiving many bitter knocks from the world and perhaps never learning how to live successfully among people. Such an unfortunate state may be avoided if the mother makes it a point to teach her child to be "social" at home. If she studies his attitude and notes his social defects by observing him in his school group, she can create similar situations and help him fit into them until he overcomes his particular inability to cooperate. She will be more than repaid by his increased joy in the society of other children.

No two children are alike, and it would be more than folly to attempt to make them conform to one standard action. Were it possible to do so we should only rob them of their personality and initiative. This would be unthinkable.

However, there are many small habits, slight physical defects and mental attitudes that go ignored or unnoticed in the home, and these have the capacity to grow with the child and forever be stumbling blocks to his success. These we can best detect by watching our children at work and play in school. Let us give our time and attention to assisting the teacher to train them to profit the most from the long process of education.

Childhood's Enemy— The Tease

By Anna Dee Weaver

When playful uncles are not in a teasing mood, they expect children to treat them with all respect.

"YES, she's pretty, but oh! her disposition!" Thus spoke the girls about Estelle, who was 15, without a chum, unpopular, unwanted. All because she had a bad disposition.

Without a doubt Estelle acquired this awful thing in early childhood, and the chief contributing factor was the fact that she was teased unmercifully from the time she could toddle.

She was a fiery little thing and teasing promptly sent her into a fury. Her older brother, who had inherited from his Irish ancestors the art of mimicry, entertained the family regularly with his wit and sallies at Estelle's expense. In their neighborhood lived an old man who, because of his objectionable habits, was not a favorite. He was unwashed, uncombed and unkempt generally. Always when he met Estelle he would pat her head and say, "How's my little girl today?"

At dinner brother would report, "Estelle saw her beau today. They would make a fine couple. Try to get him to clean up a bit, Estelle."

This would bring the anticipated mirth and laughter. Poor Estelle, embarrassed and indignant, would burst into tears and start to leave the table. Whereupon the father, suddenly very stern, would call her back.

"Sit up there now and eat your dinner. What do you care about a little teasing?" Choking back the sobs, Estelle would force down her food knowing that she dare not disobey.

The next day brother's airplane would be a wreck or his collection of birds' eggs would be missing. Estelle was merely getting even. For these offenses she would be punished. As she sobbed out her explanation, her mother would say, "You know he doesn't mean it. What do you care about a little teasing?"

Estelle's case is not uncommon. Dozens of children in dozens of families are made miserable by the teasing of older children and of bachelor uncles.

Teasing makes children bold and unlovely. Quite naturally they defend themselves, either by sharp, saucy remarks or by some vigorous physical method. When playful uncles are not in the teasing mood and wish to enjoy their newspaper, they expect children to treat them with all respect. Inconsistent, is it not?

Teasing usually ends in strife and quarreling, which disrupt any home. Therefore, it should not be tolerated. It is a real tragedy to the victim. Every black, ugly, revengeful thought leaves its mark on the child's plastic mind.

Photos by J. P. Troy

Participated in only by the few, football yet remains king of college sports. No other game gives the same thrills to the thousands in the grand stands.

Tobogganing, skating and skiing each year gain more enthusiasts.

The Health of Your

By D. F. Smiley

WHEN your boy leaves home to go to college you immediately become inquisitive about what the college will do to maintain his health. This is entirely as it should be, but before answering this question it is well to point out the fact that the college health authorities are just as inquisitive about how you have maintained the health of the boy before you sent him to college.

Perhaps we college health workers are too inquisitive, but we want to know whether a boy is really physically fit to do a year's college work, so we often demand for admission a certificate of physical fitness signed by the home physician. We want to know what his habits and physical setup are, so we give him a careful physical examination and health habit inventory as early in his first term as possible. We want to know something of his nervous stability and reserve, and we sometimes find it worth while to direct inquiries to prep school physicians concerning certain "nervous breakdowns" and mental episodes.

We find out a great deal and what we find is, as a whole, encouraging. To be sure, our freshmen still average two to three unremedied

Boy *in* College

of Cornell University

defects or faulty health habits each, after having lived the first seventeen to eighteen years of their life under the direct observation of their parents, but the encouraging fact emerges that each year our entering class comes to us a little more free of defects and a little better trained in health habits. Apparently the health up-keep through childhood and school life is improving, and health teaching and practice in home and school are already showing measurable results.

What then, to come back to our original question, are our colleges and universities doing for health? To answer this question dogmatically for the 600 or more colleges of the country would be impossible, for approximately 50 per cent are doing quite a little along health lines and the other 50 per cent are doing almost nothing. But in a general way the tendency is unquestionably toward doing a good deal more than has been done in the past.

An agreement has yet to be arrived at among the colleges of the country as to what is really essential in the way of student health procedure, but experiments in health organization and endeavor have been going on in various colleges since the University of California

Photos by J. P. Troy

Swimming pools, indoor and outdoor, call both sexes to healthful activity.

In every big meet, track records are being broken.

The calm of the freshmen to the right would indicate song rather than cheers. An interesting study in mouths.

Courtesy, Student Supply Store, Ithaca

Track runners must master the mechanics of proper breathing and posture.

J. P. Troy

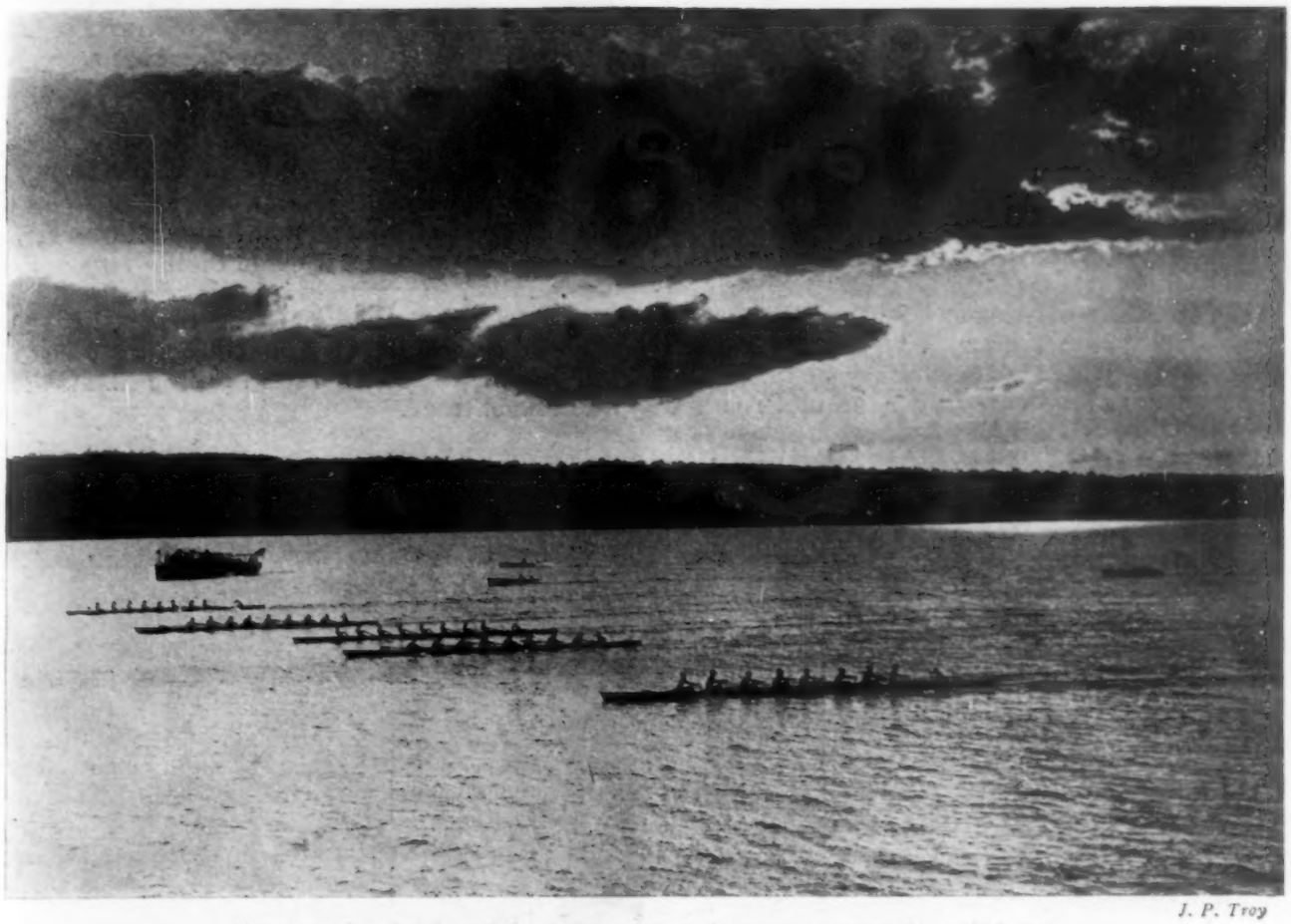
started the ball rolling in 1907. The measure of the results is going to point the way to efficient organization and perhaps standardization within the next few years. In the meantime one factor alone seems to be common to all the colleges of the country and can thus serve as a common denominator; i. e., the health needs of the average student. These can be summarized as follows:

1. Healthful living conditions:
   - Good food at reasonable prices
   - Comfortable quarters
   - Healthful classrooms
2. Efficient health service:
   - Annual physical examination
   - Annual health habit inventory
   - Medical consultation service
   - Communicable disease control
   - Infirmary care and laboratory service
3. Balanced activities:
   - A wisely chosen schedule of studies
   - Suitable physical activities
   - Suitable social and recreational activities
4. Effective health and character training:
   - Training in biology and bacteriology
   - Training in anatomy and physiology
   - Training in personal and community hygiene
   - Training in religion, ethics and mental hygiene

If we are to consider education as the process of drawing out all the latent powers that lie in the individual, it means above all else nurturing the growth process. Since the same factors that influence physical growth favorably also appear to favor mental growth, the importance of meeting the students' health needs effectively becomes immediately apparent. It is one of the primary responsibilities of the college.

So college authorities are taking a real interest in meeting the health needs of the student body. Because the average college has comparatively little money to spend in its health efforts, it endeavors to spend what it has in the most effective way. Consequently prevention has taken precedence to cure. Just as the primary objective of the army medical department has become that of preserving the strength of the army in the field and the second objective that of caring for the sick and disabled, so has the primary objective of the university health authorities become that of preserving the strength of the student body.

To do this certain wholesale sanitary measures have been taken, such as filtering and chlorinating the university water supply, pasteurizing or certifying the milk supply, examining the food handlers, inspecting and accrediting the rooming houses, providing hygienic



J. P. Troy

Nearing the finish, when every ounce of reserve power is called out.

classrooms, eating commons and dormitories as far as funds permit. Certain wholesale health activities, such as organized sports and athletics, are provided. Certain wholesale courses in health, such as hygiene, are required. But these wholesale activities of the university health authorities are definitely limited in their scope and fall far short of satisfying the student's health needs.

The student needs protection from typhoid infection, diphtheria and scarlet fever to be sure; he needs protection from malnutrition and muscle atrophy; he needs general health and character instruction. But more than all these he needs at frequent intervals a health check-up in the hands of a competent university medical adviser who is equally interested in the remedy of physical defects, faulty health habits, minor illnesses and mental maladjustments and who uses all the personal material available for pointed paternal instruction and advice to the student along any or all of these lines.

This personal and pointed instruction and advice, readily available and aided by an efficient and homelike infirmary equipped to care for every student whenever he becomes sick enough to be in bed, contributes most of all to the meeting of the student's health needs.

The health field is, however, no place for riding hobbies or building on aerial theories; least of all is it a field in which we can expect to find simple thumb rules and panaceas to solve our problems. If maintaining the health of a student body were only a matter of providing for ideal nutrition, ideal physical activity or ideal medical care, we could sink our entire health appropriation in that one project, satisfied that the student health was thereby adequately safeguarded. Such, however, is not the case, and satisfaction of not only one health need but all is essential if we are to attain measurable results in our health work.

The responsibility for student health lies not with one department but with all; organization for health maintenance and health education in a college or university demands the correlation and cooperation of all the departments of the institution.

Thus the administration department can perhaps best provide good food and comfortable housing; the department of sanitary engineering and sanitary chemistry, sanitary water supply and sewage disposal; the department of dairy industry, sanitary milk supply; the student health service, medical examination, physical and mental hygiene advice, infirmary care, communicable disease control and hygiene instruction; the university union, wholesome sociability and recreation; the department of physical education, supervised sports and gym-

nastics; the athletic association, competitive athletics; the university Christian association, chapel service, religious study and discussion groups, and vocational counsel; the infirmary, care of bed patients; departments of biologic sciences, instruction in biology, human anatomy, human physiology and bacteriology.

Even beyond this we find each professor and instructor, whether he be in law, architecture or philosophy, carrying certain health responsibilities as to the ventilating and heating of his classrooms, as to the study programs which he approves in his faculty advisory capacity, and as to the assignments for examinations and outside work. There is a definite hygiene of instruction and of the curriculum for a part of which each instructor is individually responsible.

Therefore, when your boy goes to college, his health will be of some interest to a large number of people there and, though he cannot hope to have quite the equivalent of parental care, he can expect (in at least some of the colleges of the country) to maintain a health level that will permit of his attending 98.8 per cent of his class hours and will graduate him in better physical condition with better health up-keep habits than when he entered.

Laughter *and* Health

By Helen Davis

THE Sarah Streeter cup awarded annually by the department of physical education at Mount Holyoke College to the senior passing the best physical examination was given for 1926 to Fumiko Mitani, a Japanese girl, who entered two years ago from a college in Tokyo. She attributes her health to the great amount of exercise she had to take when she was a little girl, to the habit of sitting on her heels instead of in chairs, and to the wearing of the obi, which keeps one straight. But the college girls think it is because she laughs so much that Fumiko is healthy.

Fumiko attended first a grammar school in the little village of Iwataki, where she lived, in the northern part of Japan. The pupils were very athletic.

"We went to school barefoot," Fumiko said, "and it was so cold we had to run to keep warm. They used to take the little children out to run. Once I remember climbing a mountain, and all the way was twenty miles. And when we would go over to the next village to see the chrysanthemums we would run all the way, and it was five miles."

She says that she was not strong when she attended this school—in fact, she was the weakest student—but the teachers told her if she took exercise enough she might manage to keep well. Through this exercise Fumiko became the most perfect senior at Mount Holyoke College.

When Fumiko came to the college she received "A—" in posture, which is the best mark that the department gives. But after that she began to go down, and she thinks this was due to the habit of sitting in chairs. In chairs she said she never could sit straight. She no longer wore the obi, which kept her back so very straight. But after a little while she wore her kimono again and sat on her heels whenever she could.

"American food and climate are much better than Japanese food and climate. American girls are healthier, and they have more energy," she concludes.

Fumiko has been an outstanding student, having been elected to the Phi Beta Kappa society. She has written some remarkable verse, and she has stood at the head of the class in comparative anatomy. She has been an honor student of her favorite subject, zoology. She is a member of the college choir and serves as president of the Cosmopolitan Club.

Happy, full of laughter, picturesque in her blue kimono with the orange sash, she is one of the ornaments of the college campus. She says in a story that was printed in the Mount Holyoke Monthly, the college literary magazine:

"Each man is a treasury rich and rare, and I am a happy adventurer to open these treasures. The key I have in myself. With this belief I carried my adventure to America, and I am joyous because the riches surpassed my expectation. Sometimes I stop to think and wonder why I am so blessed. I meet the nicest girls everywhere. I cannot help smiling at the goodness of my friends around me. Their mirth keeps me laughing all the time."

Common Sense *in* Mouth Hygiene

By William M. Gardner

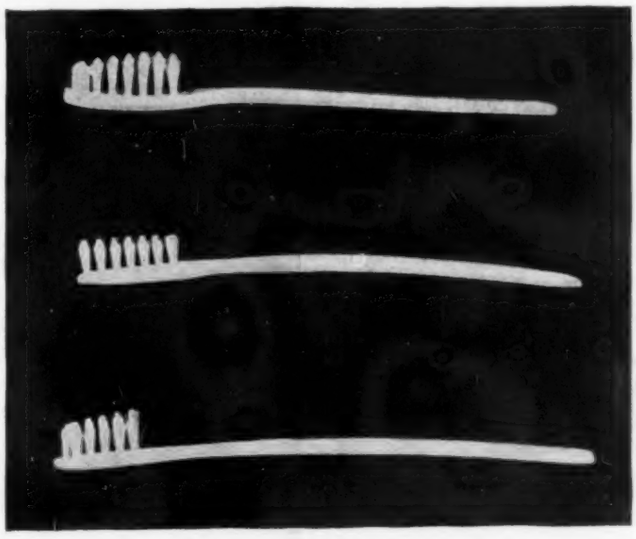
THE most effective weapon for combating dental disease is the toothbrush. For civilized man it affords a means of bringing about the same cleansing action on teeth and the same stimulating action on the gums that raw and coarse foods did for primitive man. While the toothbrush does not entirely eliminate decay, it will cut down the incidence of decay markedly. In preventing gum trouble it is much more successful. If used correctly, a toothbrush will not only prevent gum tissue disease, but will aid materially in restoring health to the gum tissue that has broken down.

Most toothbrushes on the market are too large for efficient brushing. The use of a small, fairly stiff-bristled brush is logical and advisable. The working end should be about seven rows of bristles long (about 1¼ inches) and two or three rows of bristles wide. The bristles should be of uneven lengths and the groups of bristles wide apart. The handle should be fairly heavy and at least 6 inches long. The length of the handle is important in the method of brushing described in the last issue. It must insure sufficient grasp to apply and to maintain considerable pressure.

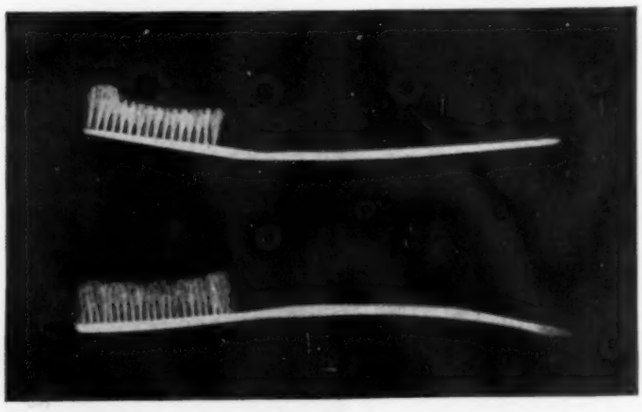
The elongated tuft found at the end of some brushes does not work as efficiently as is theoretically supposed. Such a brush adapts itself poorly to brushing the teeth on the inside and does not permit proper stimulating of the gum tissue toward the tongue. The long bristles in the tuft, after they are wet, have a tendency to buckle or bend and to slide over instead of penetrating.

Strictly speaking, no toothbrush can be made that will conform itself to the dental arch, both on the inside and the outside. The smaller the brush, however, the closer is the adaptation to the arch possible, because only a small part of the arch is brushed at one time.

Many new, good quality toothbrushes are quickly ruined by improper care. Unfortunately, they are not then thrown away but are used for months in a worn out condition. A few simple rules will lengthen the life of a toothbrush and at the same time make it more suitable for efficient brushing.



Good types of toothbrushes. These are well adapted for efficient brushing by the method described in the last issue.



Poor types of toothbrushes. These are unsuited for efficient brushing by the method described.

One should place a new brush in a strong, cold salt solution for two hours before using. It will set and clean the bristles and also take away their original harshness.

Cold water should be used to moisten a brush for brushing, also to rinse the brush after brushing. One should never use hot water. It softens the bristles, alters the shape of the handle and in a short time makes it unsuited for efficient brushing.

The brush should always be rinsed well, all the water possible shaken out of it and if it is more convenient to keep it in a glass tumbler, the bristled end should be kept out of the glass. The brush should not be kept in a

toothbrush container. It prevents drying, destroys the bristles and encourages bacterial growth.

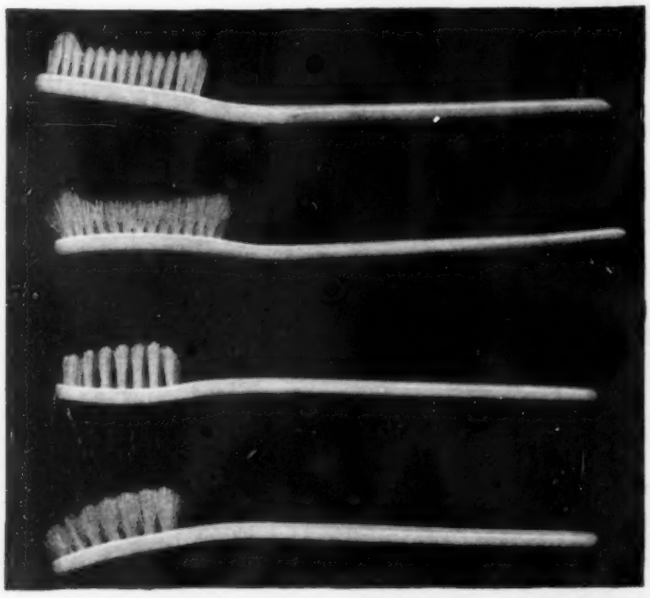
A brush should be allowed to dry for twenty-four hours after using, so that the bristles will regain their original and necessary stiffness. Every person should therefore be equipped with a pair of brushes, one for morning brushing and one for evening brushing. Supplementary brushes should be used if teeth are also brushed after meals.

Many persons use brushes that have been worn out. If a good toothbrush eliminates dental disease, to waste time with a dilapidated toothbrush is false economy. It has been demonstrated that a pair of brushes used alternately will do efficient work for about four months. It is a good plan to buy a new toothbrush every two months and throw away the older one of the pair.

Dentifrices

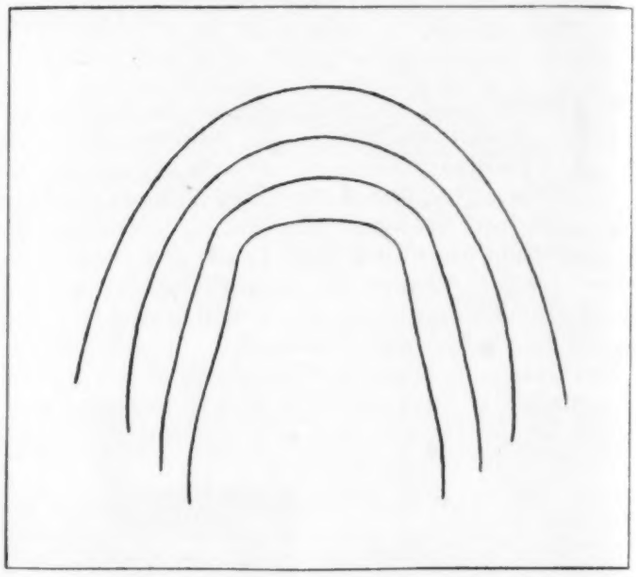
The function of a dentifrice is to aid in the mechanical cleansing of the teeth without injury to them. It should be unmedicated and should not contain too much soap or grit. Too much soap decreases the efficiency and stimulating action of the bristles; too much grit, if used diligently over a long period of time, will wear grooves in teeth.

A dentifrice is a mechanical aid in cleaning teeth, not a therapeutic agent for diseased gum tissue. It is, under no circumstances, a cure or even a preventive of pyorrhea. The medicines and drugs incorporated in many of the popular



Two widely advertised brushes with composition handles that have been badly distorted and made useless by hot water.

and widely advertised dentifrices are valueless and only afford the manufacturers selling talks to get their product before the public. Laboratory experiments with some of the widely advertised dentifrices lead an investigator to conclude that some dentifrices are put on the market "in utter ignorance of the dental and biochemical principles involved, or with intent to mislead the multitude that may usually be deceived by plausible advertisement."



Dental arches vary, and it is impossible to make a toothbrush that conforms even to the outer contours of all the different types of arches.

The dentifrice really plays a minor rôle in mouth hygiene. Even as a cleansing agent it depends entirely on the efficiency of the brush that applies it. No surface of the tooth can be cleaned unless it is actually touched by the brush. The dentifrice has in itself no chemical or magic power to clean.

Because dentifrices are pleasantly flavored, they make brushing the teeth a more agreeable task. Only a very small amount on a brush is necessary. If the amount of tooth paste used were cut in half and the money thus saved expended for toothbrushes, there would be a marked improvement in mouth conditions.

Mouth Washes

The function of a mouth wash is to eliminate, by vigorous rinsing, all the particles of food and débris that have been loosened by the brush. Warm water, a salt solution made by adding one teaspoonful of salt to a pint of water, or the same salt solution to which a little sodium bicarbonate has been added are probably not only the safest but also the cheapest to use as rinsing solutions.

The curative power of mouth washes has been grossly overestimated. In the chronic case of pyorrhea usually seen, they are ineffective, neither checking nor curing the disease. The problem in successful pyorrhea treatment is primarily the removal of all things that irritate the gum tissue (tartar deposits, faulty dentistry,

etc.) and the bringing about of an active blood exchange in the gums by means of a toothbrush.

The first part of the task must obviously be accomplished by the dentist; the second part must be done by the patient. Tooth structure and tartar are so much akin chemically that a mouth wash that would dissolve the one would also dissolve the other. Tartar must therefore be removed mechanically with steel instruments. It need not be mentioned that mouth washes cannot correct faulty dentistry. In stimulating gum tissue they are just as ineffective, being quite incapable of bringing blood to the areas involved. Many of them contain astringents, which would tend to keep the blood from coming into the area.

Why Mouth Washes Fail

Mouth washes are usually advertised as great germ killers; no doubt many of them are if they are kept in the mouth a long time. But germs are only secondary factors in pyorrhea, entering the gums only after a lesion has developed from irritations on the teeth that mouth washes cannot remove. The problem of reestablishing health in the mouth is mechanical, not chemical or bacterial. The failure of mouth washes in the treatment of pyorrhea is quite evident.

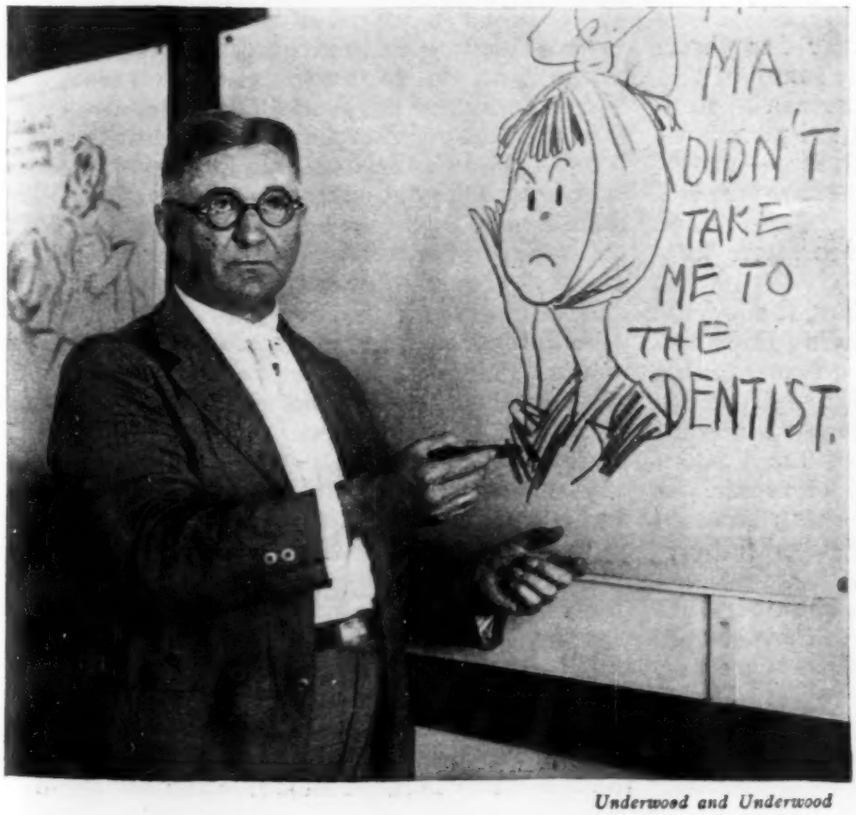
Germicidal mouth washes are valuable only in the treatment of acute mouth infections, caused by a specific germ or group of germs, as in Vincent's angina, commonly called trench mouth. Their daily use in a mouth free from specific germ disease is not only unnecessary, but is to be discouraged.

Attractive advertising, ridiculous and fraudulent claims made for proprietary mouth washes and the incessant search for a short cut are responsible for the opinion that mouths may be cleaned and kept clean and healthy by the use of a mouth wash only. The cool, clean feeling left by the agreeable, highly flavored and equally highly priced concoctions lead the patient to think that his mouth is clean. He is really only disguising a dirty one, and in using such mouth washes he is a worthy disciple of the Oriental who uses perfumes instead of soap and water.

Toothpicks and Dental Floss

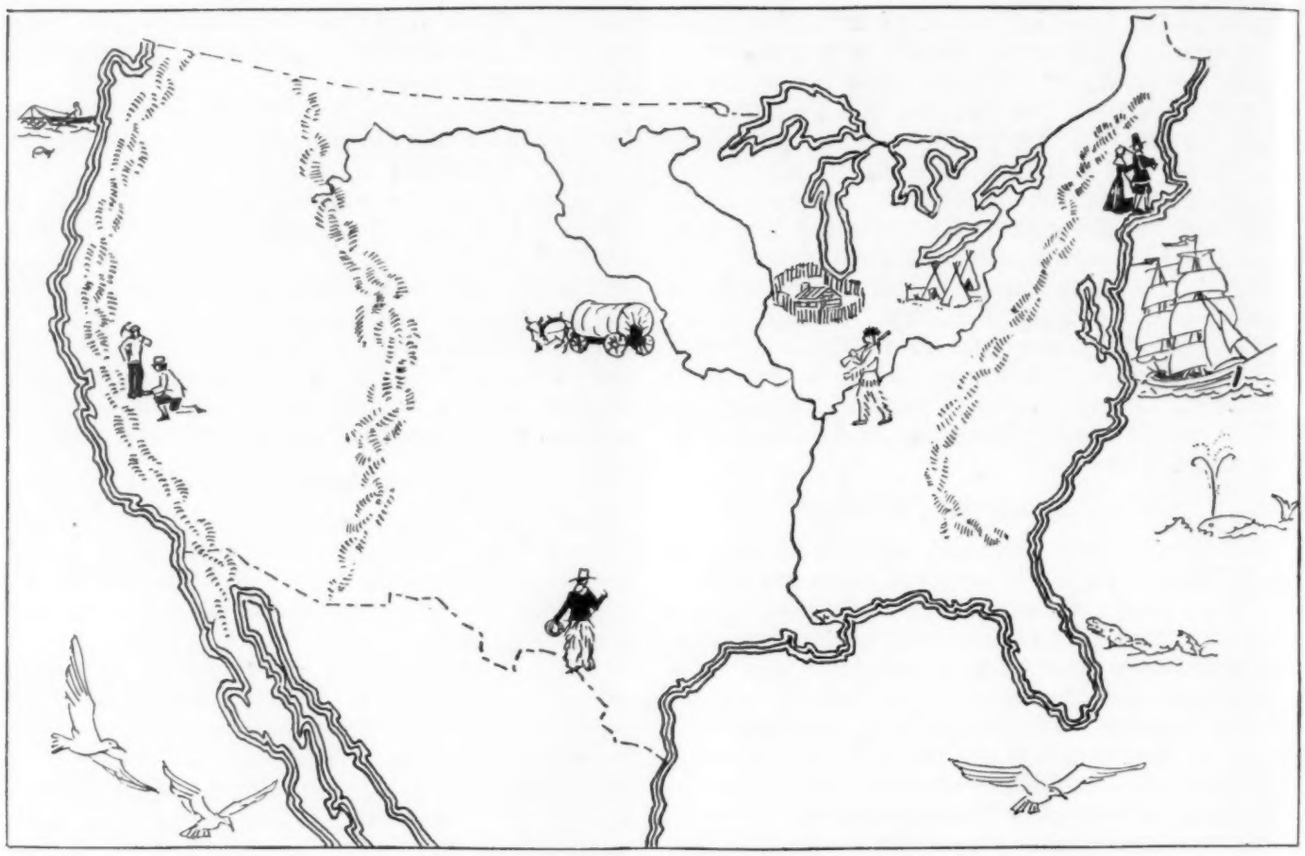
All types of toothpicks should be avoided. They irritate and lacerate the gum tissue, lowering its resistance to infection. Wooden toothpicks used over a long period of time will wear grooves in teeth.

When contact points are faulty so that food cannot be dislodged from between the teeth with a brush, dental floss may be used. Incorrect use of dental floss is harmful to the gums. It must be passed gently through the contact points so that it will not snap down on the gum tissue and lacerate it. Usually a slight back and forth movement will help to ease it by the contact point. If bleeding results from the use of floss, it is being used incorrectly.



Underwood and Underwood

Albert C. Mitchell, a Texas health cartoonist, entertains children and their parents with health drawings and health games at the Sesquicentennial Exposition, Philadelphia. He is connected with the Texas State Board of Health.



Frontiers of Medicine

By J. P. Simonds

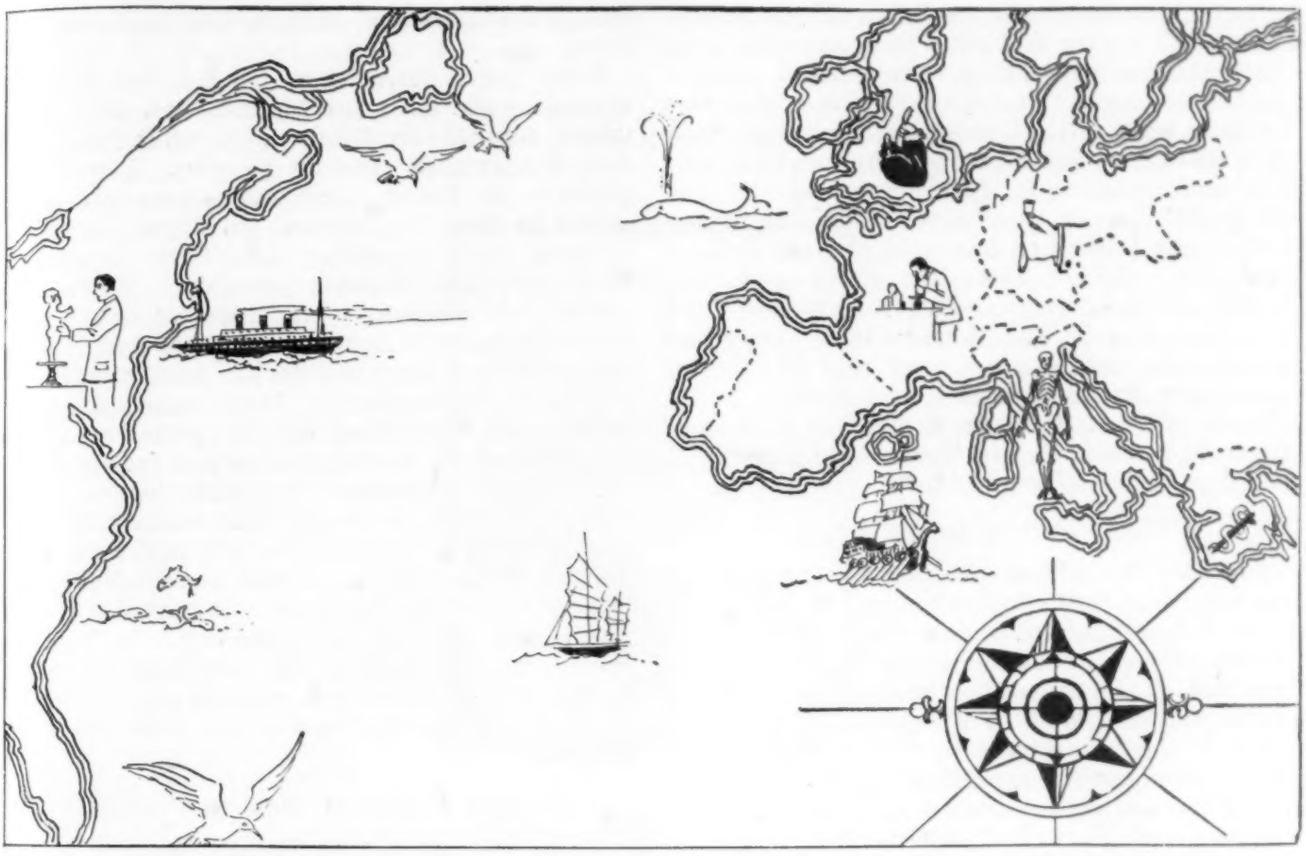
THE existence of a frontier for three centuries is responsible for many of the distinctive features of American history and for many of the essential peculiarities of the American people. This frontier was the constantly changing border that separated the settled from the unsettled part of the country, the edge of cultivation, the place where "the trails ran to and stopped."

Medicine has also had its frontiers, the indefinite and irregular but ever-advancing line that separates the known from the unknown, the place where the trails of knowledge end.

There are many striking analogies between the history of the development of the United States and of that of the science of medicine. The history of the United States, down to near the end of the last century, is composed largely of an account of the frontier and the development of the territory thus brought under the control of American men. The history of the science of medicine is the story of the progress of medical knowledge, of the discovery of new scientific facts and of the development from these of practical methods for the alleviation of human suffering and the prevention of disease.

The spirit of romance and adventure, the courage, the desire to explore unknown regions and to open new roads into fertile territory that animated the restless pioneers and frontiersmen who entered the forests primeval of this continent was the same spirit that has actuated the searchers after knowledge on the frontiers of the science of medicine. This has given to the practice of medicine many of the characteristics that distinguish it from all other professions.

Beginning in the first quarter of the seventeenth century, the frontier of the United States was for fifty years limited to the tide-water belt along the Atlantic coast. By the end of that century, the frontier had advanced to the "falls line" of the rivers that flow into the Atlantic, that is, the population had spread as far inland as the streams were readily navigable. By the middle of the eighteenth century, the frontier had topped the Alleghanies and the population was straggling down the Ohio valley and into the Northwest Territory. By 1825 the frontier had reached the Mississippi River. A quarter of a century later it had advanced to the great bend of the Missouri. At each of these places—the tide-water belt, the falls line, the Alleghanies,



In medicine as in geography, there are retreating frontiers. Hippocrates, the Greek physician, was one of medicine's earliest explorers, and since his time many famous pioneers have pushed forward the boundary line of knowledge.

the Mississippi, and the great bend of the Missouri—there was a temporary halt in the advance of the frontier. At the latter place further advance was the most difficult of all because a thousand miles of desert and mountains separated the pioneers from the latent wealth of the Pacific slope.

As each new strip of country became accessible to settlers, it went through definite stages of development: the small clearing with its farm, more scientific and intensive agriculture, the establishment of cities and the development of transportation and commerce. As the United States today is the result of the subjugation by determined men of successive geographic frontiers and the subsequent development of the territory thus opened for settlement, so modern medicine is the result of the conquest by single-purposed men of a series of scientific frontiers in orderly sequence, and the further unfolding of knowledge and practical application of principles in each newly discovered field.

The Greek and Roman physicians left little imprint on the medical science of today. Hippocrates, the Greek physician, who lived 400 B. C.; Galen, who lived in the second century of our era, and their confrères were the Leif Ericsons of medicine. They explored a few of the more accessible regions of disease, but no scientific development followed. For almost fifteen hundred years after Galen, the science of medicine was as truly unexplored territory as was the American continent between the voyages of Leif Ericson and the coming of Columbus. It was not until the Renaissance that the first frontier of modern medicine was established.

The frontiers of medicine show a logical sequence just as those of the United States have shown a geographic sequence. First, there was anatomy, or the study of the structure and arrangement of the different parts of the body; second, physiology, the study of the functions or modes of activity and interrelations of the various organs of the body; third, pathology, or the gross and microscopic changes in structure and the alterations in function induced by disease; fourth, biological chemistry, or the science of the chemical composition of the normal body and the chemical changes induced in it by disease; fifth, bacteriology, or the study of germs, and the related science of immunology, which is concerned with the relation of bacteria to disease; and sixth, preventive medicine and hygiene, or the principles and methods by which disease is prevented. These branches of medical science were developed in the order in which they have been mentioned.

The first or tide-water frontier of medicine was the study of human anatomy. No advance

in medical science was possible until physicians knew what organs and other structures the body contained and where they were located. One of the first to explore and map out this region was Vesalius, who, in 1543, published his remarkable pictures of the dissection of the human body and laid the foundation for future progress. He was the pathfinder in anatomy. After him came many early settlers on this coast plain of modern medicine. Before 1700, the most important details of the structure of the human body had been discovered. The pioneers of anatomy had to face the insidious but very real dangers of ignorance, superstition and ecclesiastical intolerance. One of them, Servetus, was burned at the stake by John Calvin "for a mere juggling of verbiage, a theologic quibble."

William Harvey as an Explorer

Just on the hither side of the frontier of anatomy was that of physiology. In 1628, William Harvey published his epoch-making discovery of the circulation of the blood. He was the first to demonstrate conclusively that the heart pumps blood to all parts of the body through the blood vessels. This discovery at first met vigorous opposition because it upset all of the fantastic theories then held by physicians, and Harvey was ridiculed and even threatened with personal violence. After Harvey, came many explorers on this new medical frontier.

To mention only one of them, Dr. William Beaumont, a surgeon in the U. S. Army, on Mackinac Island in 1825, discovered a Canadian half-breed who had an opening directly into his stomach resulting from an old wound. Through this opening, Dr. Beaumont was able to watch the changes that took place in food in this man's stomach. His work was begun in an isolated army post in the forests of Michigan and was steadfastly pursued in spite of disheartening difficulties and discouragements. In order to complete his studies Dr. Beaumont was compelled to travel about 2,000 miles, before the days of railways and good roads, and to face innumerable dangers in that wild country, while following his erratic and temperamental patient. But, in 1833, he published his famous "Experiments and Observations," which gave to the medical profession its first accurate information concerning the process of digestion.

Every patient who is benefited by modern methods of treatment of digestive disorders owes a debt of gratitude to the memory of this careful observer and persistent scientist, who was a frontiersman in a double sense of the term.

Until physicians knew where the various organs of the body are located, how they look under normal conditions and what functions they perform in healthy persons, it was not possible to know what alterations are produced in them by disease. So it was not until anatomy and physiology had been developed that pathology became possible. When the Americans crossed their third frontier they found themselves in the great Ohio and Mississippi valleys, the most fertile and productive region of the continent. When medical scientists passed their third frontier, pathology, they had entered the most extensive and fruitful field of modern medicine. For pathology is that branch of medical science that deals with disease in all its relations, especially with its nature and all of the functional and material changes that it causes in the body. Rokintansky was one of the pioneers in pathology. In Vienna, during the first half of the nineteenth century, he made over 30,000 postmortem examinations and was the greatest descriptive pathologist of his time.

Virchow Father of Modern Pathology

In the last half of that century Virchow, sometimes called the "father of modern pathology," did his great work in the development of this science. The postmortem examination is the only method by which accurate knowledge of all of the interrelated changes produced in the body by disease can be gained, by which the physician can become most proficient in that extremely difficult art of diagnosis, and by which the family can learn with certainty the cause of death.

In order that the results of pathologic investigations might be brought to the use of the practicing physician, it was necessary that some accurate means of examining patients be devised. In other words, lines of transportation had to be opened up into this new territory of pathology. This was done when Auenbrugger, a Viennese physician, described the method of percussion; and when Laennec, a Frenchman, invented the stethoscope.

The next medical frontier to be developed was that of biological chemistry. The digestion and assimilation of food, the secretion of gastric juice, the utilization of the oxygen of the air, the maintenance of a constant temperature in the body are all chemical processes. When the chemical composition of the body and the chemical reactions that take

place therein were known, it became possible to discover the chemical changes induced in the body by disease.

Exploration of the frontier of bacteriology began in the third quarter of the nineteenth century. Pasteur, born in 1822, was the first to prove that all fermentation and putrefaction and many diseases are due to the action of bacteria. To mention only a few of the many who have helped to develop this new scientific territory, Ebert identified the germ of typhoid fever in 1880; Robert Koch, in 1882, discovered the bacillus that causes tuberculosis; Klebs and Loeffler discovered the bacillus of diphtheria in 1884.

Metchnikoff, Ehrlich and many others have developed the latent wealth of this new scientific region by discoveries that have revealed the manner in which bacteria cause disease and the methods by which the body combats and overcomes the invading microbes. Thus the newer science of immunology was developed, with its numerous practical applications in the form of serums efficacious against diphtheria, tetanus and meningitis and the use of antityphoid vaccine.

The last medical frontier to be explored has been that of preventive medicine. This was the hinterland of pathology, bacteriology and immunology. Just as men from the Mississippi valley were the chief explorers of the great western plains, so men versed in the three branches of medical science just mentioned have explored and developed the field of preventive medicine. In order to prevent disease, its cause, its mode of spread and the means possessed by the body of overcoming it must be known.

Last Frontier Brings Greatest Sacrifices

Pioneers in this field of medicine have met the greatest dangers and have made the greatest sacrifices. The discovery of the mode of transmission of yellow fever cost the lives of several men who volunteered for the tests. With the information thus gained General Gorgas and his co-workers have been able practically to eradicate this disease from the earth. The sacrifice of a few men has saved the lives of many thousands of others.

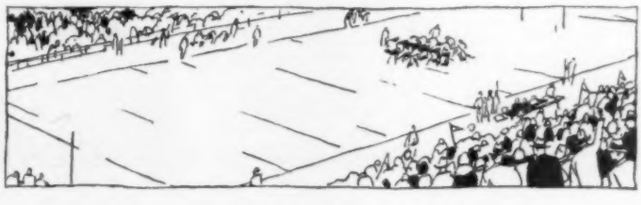
There are other similarities between the advancement of the frontiers of medicine and the pushing forward of the geographic frontiers of the United States. The characteristics of the frontiersmen were distinctive and possessed the possibilities of both good and evil.

In the western frontier towns the "big tent" with its blatant music was a pernicious institution. It harbored professional gamblers and other social parasites who preyed on the simple-minded and lonely pioneer. Quasiscientific medical men and out-and-out quacks and charlatans are the parasitic class that infest scientific medicine. They congregate on the most recent frontier of medicine to ply their trade and by advertising their preparations of alleged marvelous properties and carefully concealed formulas, their special extracts or other secret methods and devices, they despoil credulous sufferers. These are the occupants of the "big tent" on the medical frontier with its noise of glaring advertising and other means of publicity.

Present Problem One of Organization

The spread of the population from the Atlantic to the Pacific coast has taken place in definite stages in chronological order. The advancement of the science of medicine to its present state has also shown successive stages of development, which are repeated in the education of every medical student. Beginning with Vesalius in anatomy and Harvey in anatomy and physiology, the retreating frontier of medicine can be traced through the work of pioneer investigators in the centuries and decades since that time, down to the more recent fields to be developed, in which the pioneers are either still living or have only recently passed beyond the last and greatest of all frontiers, the place where the paths of life run to and stop.

The fields opened up by the several pioneers are still in process of being organized into a great, unified body of systematized knowledge which comprises modern medicine.



Mother *and* Babe

Companions *at* Play

Photos by H. Armstrong Roberts

REST *and* SLEEP

By *Max Seham*

Young girls are apt to read in bed after they are supposed to be asleep.

NIGHT after night sleep fills the reserve tank of the human machine, thus making it efficient again for its daily work. Sleep recharges the dulled brain, reloads the never resting heart and replenishes the tired muscles. What during the active life of the waking hours has been damaged and disintegrated is repaired and replaced. Reinforcements are dispatched to the weakened parts of the body and broken down cells are rebuilt.

The intensity of modern civilization is apt to soften or deaden the vigor of children unless they are taught to apply wisely the principles of rest and sleep.

Rest is nature's best healer. It is the antidote to work. Absolute rest, in the form of sleep, is under normal conditions the most ideal method for neutralizing the effects of work. In the bank of health and life sleep and rest preserve the budget that daily activity threatens to deplete.

Nevertheless, it is not necessary, or always possible, to resort to sleep whenever one is tired. Man is so made that he finds rest from one activity by indulging in another. A walk in the open will counteract the fatigue resulting from writing and reading at the desk. So the child, weary from his school work, will become alert and happy again by playing outdoors. Or if hustling about in the open has been too much for him, he will find relaxation in looking at a picture book.

Amount of Rest Needed Depends on Child

Rest, it must be remembered, depends on the needs of the individual child, assuming different forms in different children. The same principle applies to the length of rest periods; some children find relief after short periods of rest; others must have longer intervals to recuperate from the same amount of work. In general, the child reacts to rest as he reacts to work. Should he work continuously at a task regardless of its difficulty, he will naturally need long periods of rest; on the other hand, the child whose efforts are spasmodic and of short duration, intense as they may be, will recover relatively quickly from acute fatigue.

Many parents, afraid that a child may grow up to be a sleepy head, believe it inadvisable to let him sleep as long and as much as he wishes. Propagandists for more concentrated living, for a longer work day, find a telling example in Edison, whose successful career they attribute to his long hours of work and reduced amount of sleep. In their opinion, the surest short cut to success is to work while others are asleep. This is a very dangerous doctrine to apply to th growing child.

Too Little Sleep Brings Chronic Fatigue

Sleep insufficient in amount and inadequate in quality is responsible for more absences from and failures in school than any other factor. Insufficient sleep depletes the reserve energy of the child and undermines his efficiency. Insufficient sleep is a short cut not to success but to chronic fatigue and all its evil consequences.

To prove the truth that lies in these statements, one has only to compare the amount of sleep of tired children with that of normal children. Tired children often average not more than half the amount of sleep required for their age. Youths do not get enough sleep because they imitate their parents. They attend evening parties, they meet at their clubs after dinner, they go to theaters and movies at night. Apparently, their parents do not realize that they themselves plant the seed for these adult tastes of their children. One sees in the audience at evening performances small children and even babies in arms. Countless nurslings and children, while half asleep, are jostled about at night in automobiles. Once the per-

nicious habit of keeping late hours has taken root it can be broken only with great difficulty.

Girls more than boys read books until late into the night. Boys more than girls are possessed by the radio craze. Not satisfied with the program of their home town they remain awake in order to tune in on midnight concerts from distant stations. Jimmy, while his mother was worrying about his health, may have been listening to midnight concerts for six months without his mother suspecting it.

Some children reserve the late evening and the early morning hours for the study of their home lessons; others arise early in order to practice on the piano or on the violin before school. Parents seem to encourage their children to do mental work before school, because, with their minds refreshed from sleep, they are better able to accomplish such tasks. Indeed, the reason parents advance in favor of mental activity at that time of the day is the very reason for its condemnation. School work requires the best energy the child can give to it and to deplete this energy early in the morning is a serious mistake.

It is a mistake for children to rise early in the morning to practice music lessons or to do school work.

Many boys and girls find their hours of sleep reduced because they are compelled to work for pay in the evening. Girls stay up late guarding children whose parents are away for the evening. Boys grind in shops and stores often as late as 10 and 11 o'clock at night.

The question arises as to how much sleep school children must have so that they may develop normally, do their work efficiently, and keep their reservoirs of energy well supplied. Of course, the need for sleep varies from one person to another and is modified in the same person by his age, temperament and the climate in which he lives. Children whose growth is very rapid must have more sleep than the average child of the same age; girls, especially during the years of maturation, require more sleep than boys. More sleep is needed in winter than in summer.

The following schedule of sleep is based on an investigation of the health habits of 500 children in perfect health and living under normal conditions.

Age	Number of hours	Age	Number of hours
6-7	12	11-12	10½
7-8	12	12-13	10
8-9	11½	13-14	9½
9-10	11½	14-15	9½
10-11	11		

It appears, then, that children in the primary grades need a minimum of twelve hours of sleep; that for each subsequent year half an hour is deducted, and that no child between 12 and 14 years, the age of puberty, should have less than nine and one-half hours of sleep.

Equally important is the quality of sleep. The deeper the sleep, the more effective is the repair of body waste and cell damage. The common causes of disturbed sleep are noise, excitement, irritating music and strenuous play before retiring. They often induce a state of emotional fatigue, which interferes with falling asleep and is associated with fear and night terrors. Quiet and serenity of environment are absolutely necessary if the child is to fall asleep readily after he has gone to bed and if he is to arise in the morning refreshed and happy. Crowded sleeping quarters and bad ventilation are also often responsible for disturbance of sleep.

If two children must share one room, a bed should be provided for each of them. Whenever children sleep in the same room it is advisable to have them retire at the same time or at least to see to it that the child asleep is not awakened by his brother or sister. Careful ventilation of the room and sanitary bedding are also necessary to insure sound sleep. Windows shut tight at night are often the cause of headaches and nightmares. Improper food, especially if eaten shortly before going to bed, robs many a child of his needed sleep.

How often do we hear people say, "I was so tired that I could not fall asleep." First, the child becomes tired because he does not go to bed on time, and then in his state of chronic exhaustion, he finds it difficult to fall asleep, thus reducing the hours of sleep still more.

There is no better way to cure fatigue than through plenty of sleep and the right kind of sleep. There is no better way to prevent fatigue than through plenty of sleep and the right kind of sleep.

H. Armstrong Roberts

Bringing Newton Children Up to Normal Weight

By Katharine Daniels

ARE underweight children simply products of fate? Newton, Mass., in common with many other cities, once thought they were. A child born thin and weak would, in all probability, die thin and weak, according to the popular conception.

That was seven years ago, and at that time nearly one fourth of the school population of Newton was underweight. How the schools of that city reduced their percentage of abnormally thin children from 24.9 per cent to 4 per cent is a story worth telling.

What Newton Has Accomplished

Newton, Massachusetts, has been carrying on health work in the schools with very successful results. Seven years ago the percentage of underweight children in the elementary schools was 24.9 per cent, nearly one fourth of the school population. This condition was no worse than that found in many cities. Underweight children were accepted as products of fate. Nothing was done to correct an underweight condition, because people did not realize that underweight meant undernourishment and is one of the indexes of poor health.

Those who had the welfare of the children in Newton at heart decided that something must be done to make stronger boys and girls.

How the Movement Started

The schools started by weighing the children and by cooperation with the parents in teaching a few simple rules of health. Gradually the parents became more and more enthusiastic with what the schools were doing. They saw that the children went to bed earlier, that they ate more vegetables, fruit and cereals, that they drank more milk and water, and that tonsils, adenoids and other defects were corrected.

After seven years, results are beginning to show. The percentage of underweight children has been reduced to 4 per cent! For the most part, these children have not emerged from the underweight group because of some physical defect.

The interest of the child centers around his weight and how to improve it. In every school

building are scales, which make it possible for the children to be weighed each month. Heights are taken only in September and February, as the children do not grow enough each month to vary the standard height appreciably.

Weighing is done in a very informal manner, and the children are intensely interested in each other's weight. There is great competition to see who can gain the most from month to month, and he who has the most pounds to his credit, or the most money in the health bank, as it is called, is greatly admired. After weighing, the children compare their own weight with the scale of weights prepared by Dr. Thomas D. Wood of Columbia University, to see if they are up to standard weight for their age and height.

Having found their actual weight and their standard weight, the children consider themselves in either the white class, the blue class, or the red class. The children in the white class are those that are up to standard weight or over. These children are praised and encouraged to do all they can to continue to gain.

Those who weigh less than 10 per cent below standard weight are in the blue class. They are not considered seriously underweight, as heredity may be a controlling factor in a child's weight. Many of them, however, by eating more of the right kind of foods, or by an earlier bedtime could easily reach standard weight. They are urged to follow the rules of health and try to get into the white class.

The Red Class Children

The red class children are those that are more than 10 per cent underweight. These children are given an opportunity to attend special health classes, which meet once a week. These classes are attended by a doctor, a nurse and a teacher. The condition of the children may be due to a remediable defect, which the doctor discovers, or to an unfortunate home condition, which the nurse does her best to rectify by frequent calls at the home.

NAME Allen Crane 1925
SCHOOL Bates GRADE I

	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE
AGE	6 11					7 4				
HEIGHT	46 3/4					48				
STANDARD WEIGHT	48					53				
ACTUAL WEIGHT	47 1/4	49	50	50 1/2	51 1/2	52	53	53 1/2	54	55
MONTH'S GAIN		1 3/4	1	1/2	1	1/2	1	1/2	1/2	1
SATISFACTORY VARIATIONS	43				57	47				64

From 10% below to 20% above standard weight is satisfactory

NEWTON PUBLIC SCHOOLS

Form B-10

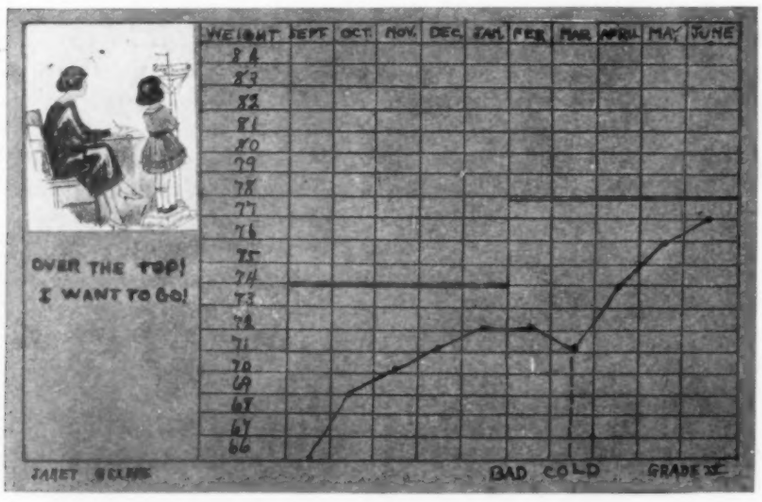
Weight cards are sent home at the end of each month. On the back of the card are printed the rules of the health game.

These classes sometimes form themselves into clubs with banners, pins and perhaps special classroom privileges, such as an extra rest period in the morning. An underweight child is never made to feel ashamed of his condition. He is made to realize that thin children are not as a rule strong children, and if he has any desire to win in athletics he must observe the rules of health more closely and gain steadily in weight.

Monthly Weight Cards Sent Home

Each month weight cards are sent home to inform the parents of the condition of their child. The children treasure their cards and are overjoyed when they can go home and tell mother that they have gained a pound. The parents often consult with the teacher as to what can be done to help a child gain. Perhaps he is of a nervous type who cannot gain until he learns to rest quietly, both in school and at home; or he may be a child whose appetite for sweets is indulged to such an extent that he refuses good solid foods. With teacher, parent and child all working to discover the cause of a thin little body, much may be accomplished for him.

In every room is a chart showing the percentage of children in each group. The percentages change each month after the children are weighed, and the boys and girls, particularly in the grammar grades, are interested in watching the percentage of red go down and white go up from September to June. There is also a building chart showing a comparison of rooms for each month. If the children in Miss A's room notice that in Miss B's room there is a large percentage of red children, they are very likely to remark about it to those children. Miss B's class makes an effort to



A weight graph made by a fourth grade child. In September she was 8 pounds underweight and in June only 1 pound.

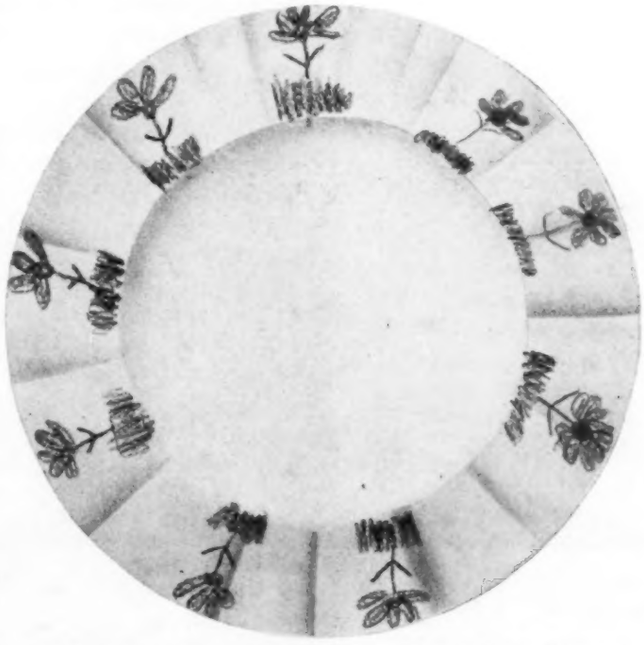
reduce the number of underweight children the next month.

Teachers who have never done any weighing and measuring ask, "But when do you get time for all this? Doesn't it interfere with your regular school program?" It does interfere, in that the children lose one-half hour a month from their regular studies. Health and the establishment of a health consciousness are more valuable to a child than the amount of academic knowledge he would gain during the half hour that is spent in weighing. The weighing period may become a lesson in itself. From it the wise teacher constructs language lessons, arithmetic lessons and reading lessons that are of more value than anything he could read from a book because they have a personal interest.

Midmorning Luncheon

The midmorning luncheon is an important activity in the health program. Every morning large crates of milk are delivered at the schools. The older boys deliver the order of milk to each classroom and at a certain period, usually before recess, the children have their midmorning luncheon of milk and crackers. The children themselves take almost entire care of getting the milk ready, even in the lower grades. They make decorated paper plates in the handwork period, which they use to keep the milk and cracker crumbs from soiling the desk. Children who refuse milk at home learn to like it by drinking it with the other children. Some children whose parents cannot afford to have them take milk bring a lunch of fruit or cookies from home to eat with the others. The Junior Red Cross fund furnishes milk for children who need it but who are unable to pay for it.

When the milk luncheon was started in the schools some parents objected, saying that they did not want their children to eat between meals. According to Dr. L. Emmett Holt's suggestion, the schools call the midmorning luncheon "another meal" and so overcome this objection. A few parents asserted that the luncheon would take away a child's appetite for noonday dinner at home. Such parents often discovered that the child had little appetite for dinner, even when he did not have the milk at school. The schools, however, did find it important to have the milk before 10 o'clock every morning.



Paper plate made by first grade child. These plates are used to keep the milk and cracker crumbs from soiling the desk.

The experiment has proved that a child will work and behave much better for having had the milk and will go home with a good appetite for dinner.

Children are encouraged to eat more vegetables and fruits and less candy. In some rooms there are vegetable charts on which a record of the number of different vegetables is kept. Children will eat vegetables that they dislike just to be able to report in class, and before long they will have learned to like them.

Every morning there is inspection to see if the children are taking pride in clean hands, faces, finger nails and teeth. If a child is dirty, he is never publicly condemned, as that may do more harm to his spirit than good to his body. Clean children are praised and encouraged, but if any child is offensively dirty, he is taken aside and made to understand that he must wash before he is welcome in the room. The purpose of this is to create self-respect on the part of the child and pride in his personal appearance. In order to do his best work he must have this pride in his appearance. Daily competition between boys and girls or between rooms is sometimes an added incentive to come to school clean, while the disapproval of the other children for a dirty child will often conquer a difficult pupil.

Internal Cleanliness Emphasized

Internal cleanliness is as important a habit to establish as external cleanliness. Children should be taught that a regular bowel movement every day is absolutely essential to good health throughout their entire lives.

Children who have dirty or decayed teeth are urged to go to their own dentist or to the school dentist. Parents are apt to think that first teeth are not important as they all come out, but the condition of the baby teeth does affect the permanent teeth and they need careful watching.

Early bedtime is stressed in all the grades. In many primary rooms there are pictures of clocks with the hands pointing to the proper bedtime for the children in that room. In the grammar grades individual graphs are made by

the children. These graphs show the time the child goes to bed each night, with reasons written below if he goes to bed later than the proper hour.

Once a year each child is given a thorough medical examination. If there is any indication that tonsils, adenoids, heart, lungs, eyes, ears or spine need attention, a notice is sent to the parent. The school nurse goes to the home to make sure that the parents are doing all they can for the child. If there is a defect in posture, the classroom teacher watches the child carefully. He is given corrective exercises by the physical training teacher, and if he is in need of special care he is sent to the orthopedic clinic at the hospital.

Every school subject offers excellent opportunities for correlation with health. In English and drawing many interesting projects have been worked out. In one third grade room the children edited and published a Health Herald. There were editorials about food, stories about health, and items about the children, such as: Henry has learned to eat spinach. Louise has had two teeth filled. Monday was weighing day. John and Mary went to bed earlier last month and have each gained 2 pounds.

Children's Broadcasting Station

In another room they have radio broadcasting every morning. The children have sets of milk-bottle-top earphones. They hold these to their ears and listen to talks on health delivered by different members of the class from a radio station at the front of the room made of blocks.

In a district where baths are a luxury there is a wash-up train. Each child has drawn a bath tub with his head showing above the top. Every Monday morning the train is assembled and those children who have had a bath on the previous Saturday or Sunday may hitch their tub to the train. Others must wait until they have taken their bath before they can join.

A delightful health garden was made in a second grade room. As soon as a child had conquered a bad habit, he pasted a flower in the garden with a line written underneath about the accomplishment. Arithmetic also is correlated with health work.

The domestic science work throughout the city is based on the needs of the children, the importance of improving their physical condition, and the knowledge of the right kind of foods and how to prepare them.

Not the Work of One Person

It is by these methods of making health a vital thing in their lives that the percentage of underweight children has been reduced from 24.9 per cent to 4 per cent in the last seven years. Health work is considered absolutely necessary as a proper foundation to all school accomplishments. In many parts of the city it is an extra emphasis to work that is being done in the home, and practical results are thereby more easily secured. Many of the mothers bear testimony to improvement in the children's food habits.

What has been accomplished for the children has not been done by a few persons alone. The work was started by Miss Mabel C. Bragg, assistant superintendent of the schools, and it is due to her contagious enthusiasm and personal interest in every child in the city that the work has been such a success. The superintendent, principals, teachers, nurses, doctors, parents and children, all working together in the great game of health, have produced a city of happy, healthy boys and girls growing into a generation of strong men and women. What has been done in Newton may be done elsewhere.

The Rural School Lunch

By Irene Hume Taylor

THERE is not a teacher in a rural community who is not vitally interested in the school lunch. When pupils come miles to school, there is no chance for them to have a substantial hot dish at noon unless the teacher manages to serve it at school.

As a rule, if the teacher will visit the parents in her community, she will find them eager to cooperate in whatever way they can to help her feed the children. Most mothers would be glad to be relieved of the daily task of putting up a cold lunch, if they were certain adequate food would be served at school.

In many cases it is possible for the teacher to work out a schedule whereby the mothers will take turns at preparing the luncheon, provided the distance to be traveled is not too great.

If that is not feasible, menus may be worked out ahead of time, and certain children be assigned the task of bringing enough supplies to school to serve the whole room for a week at a time. Thus each child, or each family, would not be unduly pressed during the year.

In other communities, it may be better for the teacher to collect a nominal sum from each child each day to pay for the lunch; she may then either prepare the food herself, or assign to the older children the project, thus combining the teaching of cookery with the other subjects taught.

The recipes that follow are planned to be sufficiently filling and nutritious to be served without any additional food. If the school day is long and if distances to be traveled are great, it will be better to have the child bring sandwiches in addition to what is served at school.

Each recipe is planned with the child's welfare in mind, and the combinations are dietetically correct. The directions are simple and the recipes easily prepared.

Cream of Tomato Soup with Rice

(Serves 20)

10 cups milk
1 cup flour
½ cup butter
2 teaspoons salt
¼ teaspoon pepper
4 cups tomato juice or thin purée
¼ teaspoon baking soda
3 cups cooked rice

Make white sauce of first column of ingredients. Heat the tomato juice with the soda till it boils. When ready to serve, combine with the white sauce, and add the cooked rice and the rice water. Season to taste.

Creamed Dried Beef on Toast

(Serves 50)

6 quarts white sauce
2 pounds shredded dried beef
3 beaten eggs
50 slices toast

Frizzle the dried beef in a little fat, add it to the white sauce, bring to boil, stir in the beaten eggs and serve immediately on toast.

Creamed Eggs and Potatoes

(Serves 25)

20 hard-cooked eggs, sliced or halved
10 cups cold diced potatoes, cooked
2 quarts white sauce
¼ cup chopped parsley, in season

Combine eggs and potatoes with the white sauce, season to taste, heat thoroughly, serve with parsley on top.

LAMB A LA KING
(Serves 60)

10 pounds cooked shoulder of lamb, diced
2 gallons skim milk, 1 pound butter, 1 pound flour, ¼ pound cornstarch
3 minced green peppers
1 red pepper, minced

Make white sauce of milk, fat, flour and corn starch; add diced cooked lamb and the diced peppers. Season to taste.

Heat thoroughly; serve on toast.

HAM AND NOODLES
(Serves 70)

5 pounds noodles, cooked in boiling salted water and drained
1 pound butter or margarine to season noodles
1½ loaves bread for toast
6 pounds diced cooked ham

Season the noodles, and place a serving of them in a soup bowl.

Place a good-sized spoonful of the diced ham on top of them, then lay a triangle of toast on the ham.

Mask the whole with a well seasoned gravy of white sauce, or chicken stock if available.

CORN CHOWDER
(Serves 45)

4 1½-inch cubes salt pork
4 sliced onions
12 cups diced potatoes, parboiled in 1 quart water for five minutes
4 quarts scalded milk
¾ cup butter or oleomargarine
½ cup flour
4 cans corn (No. 2 cans)
salt and pepper to season

Cut salt pork into small pieces and fry out, add onions and cook five minutes. Add the potatoes and the water in which they were parboiled and cook, covered, till tender. Add corn, seasoning, ½ cup diced celery if available, and the white sauce made from the milk, fat and flour. Cook slowly over low fire until thoroughly heated. Serve with crackers.

SCOTCH LAMB BROTH
(Serves 25)

Six pounds lamb shank and neck, simmered in 4 quarts water till tender. After first hour of cooking add 6 cups diced raw potatoes, 1 cup diced carrots, ½ cup carrots ground in food chopper, 2 sliced onions and 1 cup pearl barley. Cook another hour. If too fat, skim some of it off. Season and serve with crackers.

Charting the Day for the Runabout Child

IN planning the day for the runabout child there must be almost as much elasticity as the child himself possesses, says Dr. William Palmer Lucas in the weekly bulletin of the California State Board of Health.

Age and temperament, the life of the home, the amount of time the mother can give, all affect the carrying out of the general principles underlying intelligent care.

For the normal runabout, eleven to twelve hours of sleep are essential with an additional day time nap of one or two hours, but, if he is not very strong, more than this allowance should be secured for him. He should be as carefully and intelligently charted as when he was a baby.

A typical day might be planned in this way:

He gets up at 7 o'clock, has his face and hands washed, brushes his teeth and is dressed and ready for breakfast at 7:30. The breakfast should consist of fruit, cereal or soft cooked egg, toast and butter, and milk or cocoa.

After breakfast at 8 o'clock, the child should have a bowel movement. This usually takes fifteen or twenty minutes, depending on his habits and temperament. The hands should always be washed after this, so that he may be trained early in the importance of this act. Two hours of play fill the morning hours, play under supervision with some aim and purpose.

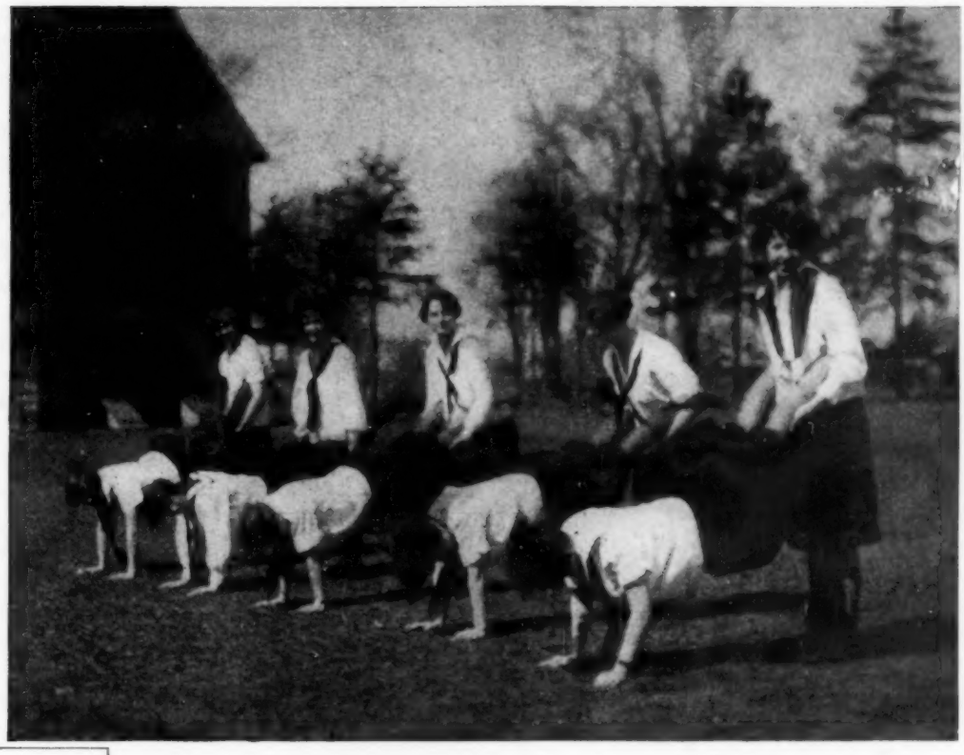
Whether at school or playing at home he should have a mid-morning glass of milk or orange juice and a cracker. The school child's half-hour rest period must come at the end of the morning before lunch or at the time of the mid-morning lunch if he does not attend school.

Getting ready for lunch means the washing of hands and face and brushing of hair. Twelve o'clock is the usual hour, and this ought to be the hearty meal of the day. It should consist of some such menu as a lamb chop, potato, macaroni or spaghetti, a green vegetable, a simple fruit or jello dessert with a piece of light cake or cookie and a glass of milk. After lunch, which usually takes half or three-quarters of an hour, the hands should be washed and the child should be put to bed for a nap.

When the child wakes up about 3 o'clock, he can be given his bath if it is convenient, and may then have a mid-afternoon lunch of milk or crackers or cookie or fruit if this does not interfere with his appetite for supper. Play with other children or some constructive play by himself should be arranged for the remainder of the afternoon.

From 5 to 6 ought to be the hour with mother, the family hour at home in which stories are read or told, which makes that time memorable to the child as long as he lives.

Then comes supper of scrambled egg or a cream soup, toast and butter, baked apple or a prune whip and a glass of milk and into bed by 6:30 or 7:30, depending on the age of the child.



A College Training *in* Health

By Marie B. Ryan

AT the college with which I am associated there is a large gymnasium with a fair amount of modern equipment; a man is in charge of the physical education for men and a woman in charge of the physical education for girls.

Two years of physical training are required before students can receive their diploma, it matters not in what department their major is. The boys engage in such major sports as football, basketball, baseball and wrestling. The girls have their own athletic association, managed and financed independent of the college. They have intramural and interclass sports, and by a graduated scale of points these girls can earn sweaters and letters. Both men and girls are given physical examinations before they are permitted to take part in sport or floor work.

I mention these things as typical of most colleges of today. Few boys and girls would care to go to a college that did not have some provision for physical education, that did not encourage athletic prowess in some form. The larger universities not infrequently require their men students to learn to swim before they are given their diplomas. With the girls it rarely becomes necessary to require this; they not infrequently have to be limited in their use of the pool, in order to give every one a chance to participate.

What does it all mean, this interest in physical training, particularly by young women? It has not always been this way. It was not this way ten or fifteen years ago when I first went to college. That is, it was not so universal. I can recall that my mother objected to my using the swimming pool in the city Y. W. C. A. To her it seemed hardly the right thing for a young lady to do. It is absurd to try to imagine a mid-Victorian lady playing basketball or tennis, or taking floor work in a college gymnasium. As for swimming in a public pool, it is to laugh!

In the seventeenth century Daniel Defoe considered it one of the most "barbarous customs in the world" that the men of that time denied the advantages of learning to women. Obviously he was referring to the ordinary academic training, for later he wrote: "They should be taught all sorts of breeding suitable both to their genius and quality. And in particular Music and Dancing; which it would be cruelty to

bar the sex of, because they are their darlings." Defoe would also "venture the injury" of giving women more tongues than one! But never a word about physical training or training in the hygiene peculiar to their sex. To him they were delicate, glorious creatures.

Two centuries later John Ruskin, writing on the education most suitable for woman, said: "The first of our duties to her is to secure for her such physical training and exercise as may confirm her health and perfect her beauty, the highest refinement of that beauty being unattainable without splendor of activity and of delicate strength."

Although Ruskin regarded woman as something impersonal, a kind of manikin, nevertheless his thoughts show that woman had advanced in the estimation of mankind quite considerably during those two centuries that separated him from Defoe. Ruskin would first mold her physical frame "and, then, as the strength she gains will permit you, to fill and temper her mind with all knowledge and thoughts which tend to confirm its natural instincts of justice, and refine its natural tact of love."

Underwood & Underwood

Two college girls are dressed for motoring; one in the styles of twenty years ago and the other in a simple costume of today.

The quarter century since Ruskin wrote has given woman something besides the right to vote. We frequently run across the expression that this is the age of the child. I do not deny it; but it could never have been the age of the child had it not first been the age of woman. Woman has been emancipated. Although her proclamation was never signed by any president of the United States, or her freedom ever fought for on the battle field, nevertheless she has been emancipated; and the more glory to her, for she did most of it herself.

For one thing she has been set free from the bondage of unhygienic clothing. The wasp waists and hoop skirts of our grandparents have gone, let us hope forever. The long, street-sweeping cigar-stub collectors, weighing down the whole body, were anything but hygienic. If they were more moral, then we must conclude that morals and hygiene do not correlate.

It is bad logic that leads one to conclude that, because a woman wears less clothing now than she did a few years ago, she is less moral. Clothes have precious little to do with morals. The college girl who rolls her stockings and wears bloomers while playing a game of basketball before a mixed audience is not in the least immoral either in thought or act. After all, they are not so nearly nude as are the boys when they play the same game before a mixed crowd of spectators.

One's thoughts have a great deal to do with one's morals, and there is nothing better for improving morals than to make the mind and the thoughts healthy and vigorous. What can do that more readily than athletic sports? It is the morbid, half-dead, delicate, spinster-doomed bleacherite who thinks the immoral thoughts, not the girl on the floor. Her mind and body are healthy; pure thoughts course through her mind, and pure blood through her body.

In her science classes, the college girl learns that there is nothing shameful about sex. It is only the most prudish, comstockian-reared young miss who hesitates to talk of the sex of birds, of animals, of flowers. Patently, any special instruction in sex hygiene is given in segregated classes. Healthy minded students soon discover that it is far better for them to learn how to correct sex disorders than to be too prudish to learn and to suffer from ignorance. Any one associated with college girls in this particular field will be shocked more frequently by what they do not know and should know, than by what they do know and should not know, One often wonders about the mother of these girls; just what her excuse could be for so neglecting them.

College education has played a large part in the emancipation of women. The expression, *mens sana in corpore sano,* a sound mind in a sound body, has really become applicable to woman as well as to man. Now when the psychologists emphasize the fact that the condition of the body perforce affects the condition of the mind, and that in order to have a mind perfect in every respect we must have a body in good working condition, they make no distinction based on sex. They have even gone so far as to say that the variation among men is greater than the variation between men and women. Therefore, if it is true that in order to have a sound mind men must have a sound body, it is likewise true for women. Men themselves have even admitted that, without the

apologies that Defoe made for thinking that women should be given more than one tongue.

It is true in Iowa, and I have no doubt it is true in other states as well, that a person is not granted a certificate or allowed to teach—in country schools as well as in city schools—unless she has had enough training in physical education of college grade to enable her to give exercises to public school children.

Teachers Forced to Take Physical Training

The recent passage of this law forced many teachers to return to summer sessions of colleges in order to take physical training. I have had classes composed entirely of women forced into the work in order to save their jobs. And such exhibitions as they did make on the gymnasium floor! And in the swimming pool, when a few of them made the venture! They were surely replicas of their Victorian ancestors. Not interested in exercises or games themselves, one can imagine how little they stimulated their pupils to become interested.

A well known middle western physical director said recently that he hoped to instil with lasting effects into the young men and women in his classes the necessity of learning to play at least one game that they could always enjoy. The actual place to learn the value of organized play is in the grades; but since that seems impossible, it is necessary to work backward, interesting the college students who will in turn teach public school pupils.

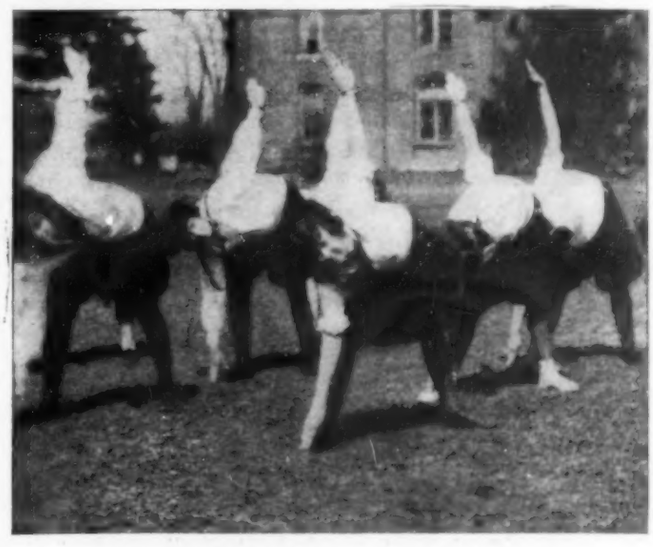
Teachers and Mothers Must Insist

In every public school there should be: (1) regular medical inspection and supervision; (2) physical instruction in hygiene and recreational activities, and (3) health instruction and guidance for in-school and extra-school experience. Many schools already have these; but many others have not. The college trained woman, either as a teacher or as a mother in a community, must do her part to see that they are provided.

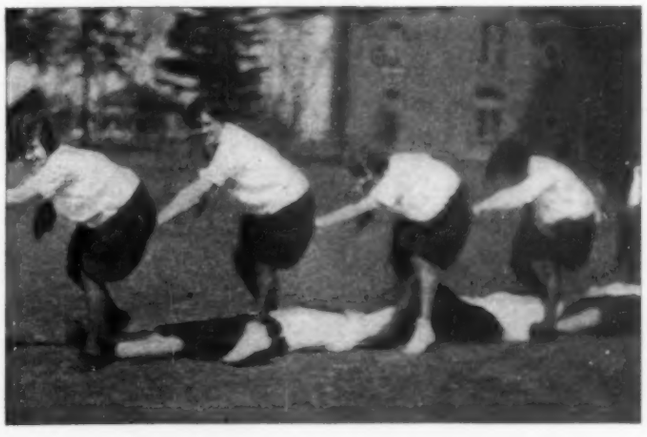
It is natural to give expression to physical vigor, and, in the midst of the hyperactivity of our present day world, suppression of this natural tendency will no longer suffice. Schools and colleges must establish among their students the habit of recreation and play. This must become a regular procedure and not an intermittent spurt. Ours is a day of efficiency, and no one can be efficient without physical health and vigor. Mere freedom from disease is not enough; one must be strong and healthy.

Since woman has taken her place in the professional, commercial and industrial world by the side of man, all that applies to the latter with reference to health efficiency applies likewise to the former. If a woman is to have a sound mind in a sound body, when she goes to college to get the one she should see to it that

Building a pyramid in the class games at Iowa Wesleyan College.



Airplane callisthenics on a college campus.



Skinning the snake is a game that sets every one to laughing.

she gets the other. Too frequently we find girls neglecting the one for the other. The most glaring sins are committed against the body.

Such sinners are not always to blame so much as are their instructors. Not uncommonly professors think that the only thing that counts is a perfect recitation, even if that recitation has been learned at the sacrifice of health. I know of a college at which the restrictions on class attendance are so severe that girls attend class when they really should be in bed. Most reputable industries make some allowance for the woman who is periodically ill, but not so this college.

The body revolts under ordinary conditions far less frequently than the mind does; and because of this girls abuse the body more than they do the mind. The college should see to it that the girls are trained in the care of their bodies. One particular thing that they should learn is regularity of life—regular hours for sleep, regular hours for study, regular hours for eating, and regular hours for play. I have seen listless, scrawny, awkward girls enter college and before the year was gone become attractive, graceful young women. In fifteen years' association with college girls, I have seen only one girl lose her health while in college, and she should never have been allowed to matriculate. Those whom I have known to be sick have become so because of their dissipation and irregular habits. Few girls hurt themselves studying, and almost every reputable college now has provision for guarding the health of its students.

False Modesty Has Been Cast Off

The false modesty once associated with women is being cast off. Clothes may make the man, but the absence of them is making the woman. That is no trite expression. She may still be a slave to fashion, but that fashion must conform to hygienic and comfortable limits. If her mind is to be untrammeled, so must her body be.

Since God has given woman the most beautiful form of all his creatures, she believes it is her privilege and her moral right to make herself as beautiful as she can. If her arms are thin and ill proportioned, she has learned that she can improve them. So with her ankles, her waistline, her face. The discovery that physical culture was intended for woman as well as for man has meant far more to womankind than all the unguents, Lydia Pinkhams, cosmetics and electric needles combined. Colleges are just beginning to learn this.

Thinking in Terms of Lifelong Health

When I go before a class of young women to direct them in gymnastic exercises, or when I teach them how to play some organized game, I feel that my responsibility and my privilege are unexcelled by any college professor of Latin or Greek, mathematics or science, English or history. When I direct a certain girl to take corrective exercises for some physical disorder, I am as conscientious about it as is the instructor who tells a student he needs special coaching in his mathematics. Many times the instructor means the student needs special coaching in order to pass the examination which he is to give. When I suggest corrective gymnastics, I am thinking beyond any examination that the student will ever take. I am thinking in terms of the lifelong good health of that student.

Not the least of the benefits to be derived from a good college course in physical education is the instruction given young women in caring for their health in after years. Ideals and attitudes in physical education are just as important as they are in academic work. To make one girl enthusiastic about health problems is certainly just as high an ideal for a teacher as it would be to make one boy enthusiastic about raising hogs and cattle, wheat and corn.

Sanitation *in the* Kitchen

By Grace Marian Smith

Part II

Rinse off the dishes before washing them.

A DISCUSSION of sanitation in the kitchen would be incomplete without reference to the method of washing dishes. Simply sousing them through water of any temperature and thickness does not comply with the requirements of sanitation.

Much time is spent polishing silver and glassware by people who do not give any attention to washing the same pieces in a manner to make them fit for use. Discussion is indulged in as to whether the silverware should be washed before the china and similar points of precedence, which in no way relate to sanitation. The same people rinse the backs, not the face, of plates, and the outside, not the inside, of drinking glasses and cups.

Proper care of the kitchen drain will prevent clogging and plumbers' bills.

Removing the food particles is not the only, nor even the chief, reason for washing dishes. The rims of the cups and glasses, the tines of the forks and the bowls of the spoons—the parts that the mouth has touched—need special attention. Dishes for washing should not be grouped according to their composition or cost, neither of which has anything to do with the matter. If all dishes are held under the faucet and rinsed off, wiped off with a bit of paper, or scraped clean of food particles, it will not make any difference which are put into the pan or tub first.

With plenty of hot and cold water and a dish hose, the problem is easy. The dishes can be rinsed off by turning the spray on them, cold water first so as not to cook the proteins and starches onto them, followed by hot water for the greasy pieces.

When the dishes have been freed from particles of food, they should be placed in the dishwashing machine or a large pan or tub of hot soapsuds. The nearer the temperature approaches boiling the better. It is impossible to put the hands into boiling water, but no one wants to put her hands into dishwater any way. If the dishes must be washed by hand, the best utensil to use is a stiff brush with the bristles set in a wire foundation, the whole bent into an oval and attached to a handle. The brush can be put into boiling water, and there is no need to put the hands in.

Dishes may be rinsed by spraying with the hose, turning the hot water faucet on them, or dipping them in a vat of boiling water, and should then be set to drain in the draining basket. In three minutes, they will be dry and ready to be put away, and they are much more

sanitary than when wiped with a towel that may be in any one of several stages on the way to the soiled clothes hamper. Dishes washed in this way are not only clean, they are sterilized. Those soused through dirty, half-cold water thickened with the accumulations from many unscraped, unrinsed pieces are not pleasing to think about.

Small utensils used in preparing meals should be selected without complicated parts. Otherwise they are difficult to keep sanitary and they get out of repair easily. Sufficient storage space should be planned, so that none of them are exposed to the dust. There is no reason for hanging them in the open twenty-four hours a day, because one may want to use some of them for five minutes. For spoons, egg beaters, potato mashers and similar tools, one should have a shallow cabinet within easy reach. The pieces can hang on the back wall and the inside of both doors. When cooking, the housewife may throw the doors open, as she does those of the kitchen cabinet, bringing all tools within easy reach. When the work is finished, the equipment may be returned to its place, and the doors closed protecting it from dust.

Small utensils should be placed in a shallow cabinet, instead of being hung in the open, exposed to the dust.

Among the first requirements of a sanitary kitchen is a sanitary housewife, one who has some knowledge of kitchen equipment and of everyday chemistry and physics; not necessarily the things studied from books, though that studied from books should include the properties and reactions of everyday materials.

One man thought his wife was as good a housekeeper as he knew, but he said that once in six months they sent for a plumber to open the sink trap because the drain was clogged. I do not wish to discourage a man's praise of his wife's housekeeping, but I have no recollection of ever calling a plumber to perform a similar operation on our kitchen drain. I suspect they do not have a plumber as often as he says. It only seems often when he pays the bills.

Some understanding of the "works" would help avoid such a nuisance and expense. The trap in the drain-pipe is there to hold water as a barrier to prevent sewer gas, with its unpleasant odors, from backing up into the house. Large particles poured into the pipe may collect there and clog the drain. If the holes in the sink strainer are too large, one should change the plate for one with smaller perforations.

In pouring waste into the sink, it should be poured through the "sink corner," a perforated, triangular pan for holding waste, or through a colander. The larger particles will be strained out and can be put into the garbage. Pouring hot soapsuds through the drain after each dish-washing operation is a good practice as it prevents an accumulation of waste.

Of course, if one pours bacon drippings or other grease into the drain, it will harden when it touches the cold pipes and will form an impassable barrier against which particles pack. Soon there is a clogged drain and a plumber's bill, unless one is mechanic enough to do one's own plumbing. In such a case ammonia should not be poured into the pipe to clear it, as the ammonia may unite with the grease to form a soft soap, which clogs, the last state being worse than the first.

A "plumber's friend," a rubber suction cup attached to a wooden handle, set over the drain and the handle churned up and down without lifting the rubber from the sink bottom, will force down stray pieces that have been allowed to collect in the pipe, thus restoring the drain to usefulness.

Some housewives who have grown tired of the eternal sameness of kitchen work would find new interest and enthusiasm if they would provide themselves with manuals and learn the properties, mechanics, history and romance of the tools with which they work. It is a fascinating study.

I have discussed only kitchens in city homes. In village and farm homes where there are no water or lighting systems, no gas or electricity for fuel, one has the problem of working without the convenient faucets of hot and cold water, without adequate lighting, heating and clean fuel.

Water and light are so essential to sanitation and to making work easier in the home that, by some system or other, they must be made available to all.

A Child Is to Be Born

VI. The Clothing of the Expectant Mother

By BELLE S. MOONEY

WOMEN are lovelier in motherhood than at any other time. Maternity is nature's plan for completion of normal physical development. It transforms the slender proportions of the girl into matured womanliness. And as slimness gives way to more gracious loveliness, a new dignity, a new and becoming carriage develops.

It is entirely appropriate that the happy anticipations of the months of motherhood should have the added enjoyment of pretty and becoming dress. Good appearance is a desirability dictated by good sense at all times. But it is especially to be desired when the changing figure makes ill-adapted garments conspicuous.

It is happily no longer necessary for women to deprive themselves of their customary associations and recreations and virtually remain in retirement during the months of pregnancy because of poorly adapted garments that seem to emphasize instead of concealing increasing girth. For the designing of maternity dress has developed such skill and artistry that all clothing for the months of approaching motherhood may be not only comfortable and hygienic but beautiful as well. The old Mother Hubbard, which was practically the only maternity dress our grandmothers had, is fortunately relegated to an unlamented oblivion, and the young mother of today is provided with a bewildering supply of attractive garments for all times and occasions. Not only are house dresses skilfully designed to conceal the condition by clever features that lend graceful outlines and provide for changes in the form, but graceful street dresses, evening gowns and sports wear indulge every taste.

The expectant mother can now buy clothing that is both healthful and stylish.

Hygienic demands for maternity wear differ but little from healthful dress for any other time and condition. Health requirements for dress are that it should be light in weight, porous in weave, devoid of tight bands or restrictions of any kind or at any place on the body and of warmth to be dictated by the weather instead of the season. All these requirements should be complied with in maternity dress, and in addition there should be adequate provision for the increasing size.

What is the best fabric to wear next the human skin has long been the subject of scientific study. Exhaustive experiments with cotton, silk, linen and woolen textiles of every conceivable weight and weave have led the authorities to the conclusion that cotton material is best for all underwear that comes in direct contact with the skin.

Of course we do not breathe with the skin, but one of its most important functions—that of eliminating the perspiration—is a partnership of the breathing function of the lungs. The skin cannot act efficiently unless its heat and moisture can evaporate readily. Any fabric of hard, close weave prevents evaporation, and by holding in the body's heat and

moisture increases bodily discomfort and makes an unhygienic garment.

The fabric that least interferes with the skin functions is of very open, porous weave. Any preference for cotton or wool may be a matter of individual choice, as experiments prove that it is the closeness of the weave that determines the healthfulness and comfort of underwear rather than the choice of cotton or woolen fibers in its construction. Health experts are advising a light porous cotton garment for underwear next the skin and a woolen garment of sufficient weight to protect adequately against the cold for outer wear. In other words grandfather's red flannel shirt is transposed to grandson's red sweater, to the latter's great advantage and comfort. The change may be extended to admit all sexes, ages and conditions.

As pregnancy is inclined to stimulate all bodily functions, any increased activity of the skin in the way of excessive perspiration should be provided for in the underwear of light weight, porous weave and elasticity. If these three demands are filled it makes little difference whether the garments are of cotton or of wool. Linen is the next choice from a physiologic demand for moisture and absorption. Silk is the last choice, as it is the least absorbent and most heat retaining.

Knit Union Suit Is Best

For maternity wear the union suit of knitted wear is most desirable, because it is free from all constricting bands and because its great elasticity permits unlimited stretching without discomfort. High neck or low neck, long or short sleeves, knee or ankle length are all questions for individual preference and do not affect the garment's propriety or usefulness.

Hosiery that is light in weight and large enough to insure freedom from pressure or binding and is conveniently supported below the knee without constricting bands or pulling hose supporters will complete the clothing next the skin. Over this underwear a one piece slip that hangs from the shoulders without constriction about the bust, waist or hips, and a dress as simple or elaborate as taste may dictate, will fulfil all requirements for maternity wear except shoes, hat and outer wear.

Dresses, as well as coats and wraps, to meet every preference, are constructed by designers who specialize in maternity wear. This clothing is provided with adaptable adjustments that permit changes necessary for larger size without altering the grace or the style of the garments.

An appropriate shoe for maternity wear does not differ materially from a health shoe for any other time of life. As walking is a most healthful exercise for the pregnant woman, foot discomfort should not be permitted to interfere with its daily practice. A shoe sufficiently broad to allow free movement of the toes and a low flat heel that gives natural support to the arches will insure foot comfort for all purposes.

The high heeled shoe is especially pernicious in its effects on maternity. It throws the body out of its natural poise and does not permit its natural support. In the latter weeks of the period especially is the high heel the foe of comfort and safety. For as increasing weight makes greater demands on the foot's useful mission, swelling, spraining or twisting of the ankles are easily induced by high heels.

Corsets and Supports

The question of corsets or of other supports is one that should be decided by the attending physician. Under normal conditions no corset is needed. Nature has provided a remarkable support in an abdominal wall built up of muscles superimposed one on the other in a way that almost defies injury; this is far superior to any kind of corset that can be made. This muscular structure is fully adequate to the demands of pregnancy when everything else is normal.

But it frequently happens that the abdominal wall is not fit for its office. There are also times when the gravid uterus presses on neighboring organs and causes discomforts that can be relieved by some kind of support. Whether this shall be a corset, belt or band, or some other specially devised accessory should be decided by the physician, whose familiarity with the condition will make him best able to judge the requirements.

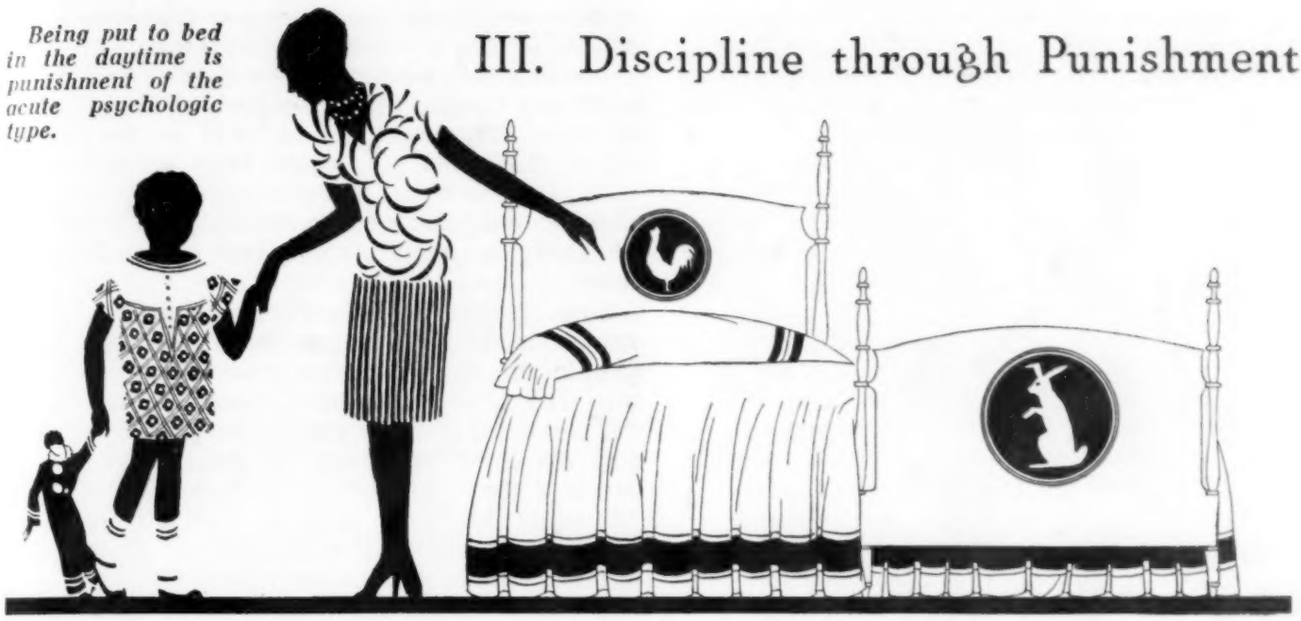
In other words, there is no physiologic need for a corset or abdominal support in pregnancy, but there is frequently a surgical need for one. When this need arises it is best met by filling the individual requirements with the support indicated by the condition, as every other surgical need is filled.

During the latter weeks of pregnancy a brassière for the support of the breasts is useful and under ordinary circumstances is all the support that is required.

The modern mother is most joyously relieved of the vexatious and nerve racking necessity of making unusual clothing for herself and of the unpleasant suspicion that her condition need make her conspicuous. A choice in either simple or elaborate clothing in every variety of color and textile affords her ample opportunity for wearing becoming colors in any material.

Relieved of every dress anxiety, the mother may anticipate the arrival of the little one in the peace and joy that the happy event inspires, and the time may be spent in cultivating the good health that is a necessary foundation for baby's vitality as well as mother's future well-being.

III. Discipline through Punishment



Being put to bed in the daytime is punishment of the acute psychologic type.

Training the Child to Obey

By Smiley Blanton and Margaret Gray Blanton

IN SPITE of the best training by the wisest parents, the child will do some definite things that will have to be stopped. New habits must be established in the place of the old, and sometimes the breaking of old habits will have to take the form of simple prohibition. Then occurs what we call punishment.

There are three types of punishment: The first is physical punishment; the second is acute psychologic punishment, and the third is prolonged psychologic punishment.

To Punish Is to Inflict Pain

Punishment involves pain. If it does not involve pain it is not punishment, and parents should look the fact straight in the face that to give pain of any kind is to inflict punishment and to punish is to inflict pain. Many parents seem to feel that there may be some compromise; but there can be none. One rule must be followed: The pain inflicted must be greater than the pleasure derived from a given act if the punishment is to be effectual.

Physical punishment should be sharp, short, and used for the purpose of giving a conditioned reflex. The conditioned reflex is the most important method of learning with which the child is originally endowed.

The nervous system is so organized that the body is automatically withdrawn from painful stimuli without the action of the conscious mind. If the child's finger touches a hot stove, the hand is withdrawn. Speaking broadly, this is an example of a simple reflex. After the child has had his finger burned on the hot stove, the next time he sees the stove, even though it is not hot, he remembers the pain and withdraws his hand. The original stimulus of heat is no longer there. The sight of the stove is sufficient to make him withdraw the hand. It may be said that the child has been conditioned to the the sight of the stove so that he will jerk his hand away from it.

Dr. John B. Watson gives the example of a child who was frightened at the sight of a rabbit. Having once been frightened at the sight of a rabbit, the child would show fear at the sight of a rat, dog, cat or fur rug. The child had been conditioned to fear other furry animals.

Purpose of Giving Physical Pain

If a child is slapped on the hand when he reaches for something, the pain given should be sharp enough that the child will withdraw his hand next time at the same point. Physical pain should be given only for the purpose of forming a conditioned reflex. But in inflicting necessary pain, we must be careful to guard against the sadistic, or cruelty, tendencies, for there is a certain amount of pleasure involved in the infliction of pain.

To shut the day-dreamer in a closet is merely to give him a glorious hour or two in which to indulge his tendency.

The question of acute physical pain brings up many questions: What is the best form? What are the age limits?

If whipping is resorted to—and it should be used rarely—it should be either a sharp rap on the hand as the child is reaching for something that is forbidden or, if it is more of a ceremony, the use of a small leather strap or switch on the bare calf of the leg. The clothing should never be removed in order that the child may be whipped, and the child should never be put across the parent's lap and whipped on the buttocks. This is absolutely against the best laws of mental hygiene. As a result of such punishment many children develop actual erotic zones and experience pleasurable sexual sensations much to the distress and often to the bewilderment of their parents.

Age Limit for Physical Punishment

The question is often asked, How old should a child be before physical punishment is permissible, and when should it stop? This varies with the intelligence and the type of the child, but it is fairly safe to say that the child should not be given physical punishment before the second year or after the eighth if the intelligence is normal.

Although the second year seems fairly young for punishment, situations arise in which it seems advisable at even a younger age. For example, a teething baby of 14 months bit the mother severely on the neck several times. The mother resorted finally to the old expedient of biting the child in return each time, and the trouble ceased. At first glance this would not exactly be classed as physical punishment, but of course that is exactly what it was.

Physical punishment is usually more effective and most needed up to the time of the slowing down of the speech, at about 4 or 4½ years. After that time the child may be reasoned with, and his word memory span is longer. A child correctly trained up to the age of 5 will not be likely to need much physical punishment later.

One of the most destructive things in connection with physical punishment is that many people use it as a threat and do not carry it out. It is absolutely destructive to say to a child, "If you do that I will punish you," and then let him do it without making good your threat. Much of the futility of physical punishment, and the other kinds as well, is that it is used as conversation for the adult instead of training for the child.

Punishment should usually occur at the first offense, if the child knew his act to be forbidden. There is no object in giving him a "practice period." It is futile to sit and say, "If you do that again I shall punish you." The child usually senses that you are not ready for the issue.

A girl of 4 addressed a question to her mother. The mother went on talking. The child repeated the question and struck the mother a light blow on the cheek. It was not a real slap, but it was not a caress. The mother then said, "If you do that again, I shall punish you." It is needless to add that the child did it again.

This whole proceeding was wrong. A child of 4 will ask questions. If the mother did not purpose to answer them at that time, which she had a perfect right to decide, she should have set the child at some play or sent her from the room. Once the child spoke, she should have been promptly told to run and play or not to question again. When the situation had got out of hand and the child had struck, then the blow in return should have been immediate, decisive and painful. There was no object and no value in letting the child have a practice blow at her mother.

Physical, as well as psychologic, punishment must be aimed to control a distinct situation; it must be adequate, and it must be immediate and on the first offense known to be an offense. If the child does not know that what he has done is wrong, then he should be told that it was wrong but he should not be threatened.

Acute Psychologic Punishment Good

Acute psychologic punishment, the best known forms of which are scolding, depriving the child of something that he prizes very much, or putting him to bed, is a brief, but nevertheless an acute, form of unhappiness. This form has dozens of variations and has the great advantage that it does not involve actual physical pain.

It sometimes does not establish, or it is at least less likely to establish, in the child feelings of revolt and marked anger. The child has also more time to get adjusted to it as a form of punishment. It is the sort of thing that can be terminated quickly by the parent if he finds that it is not working.

Punishment is for the purpose of changing behavior and not for the purpose of social revenge. Parents have not only borne the child but they have reared him. They have no right to revenge themselves on a child for their own errors and their own poor judgment, their poor training, or whatever the cause of misbehavior may be. They can only say, "We have made a mistake here and we must modify it to the best of our capacity."

Prolonged Psychologic Punishment Bad

Prolonged psychologic punishment is often not thought of as punishment at all. It consists usually in pouting about the behavior of a child, in bringing up the subject again and again, referring to it whenever the occasion permits, or in a withdrawal of the approval and companionship of the parents for a long period of time. From the standpoint of mental hygiene there is probably no one element in the home training that is more destructive.

One of two things happens. The child is at first distressed, then irritated, then indifferent or actually antagonistic; or, if the punishment is effective and the distressed stage is retained, a whole chain of destructive types of response is established. The child becomes an anxiety type, or moody or depressed.

Agitated depressions in late adolescence and early adulthood may often be traced to this destructive type of behavior of parent or nurse. To correct a little child for something and then, when she comes for comfort and reassurance, to say, "No, go away; mother does not love naughty little girls," is cruel.

To put a child in a state of psychologic discomfort for more than a few hours is destructive. One should also remember that only in morbid individuals does the discomfort remain as discomfort. In a healthy child the discomfort soon turns to anger, and the effect of the punishment then has been nullified. The wise parent will never attempt to reason with the child when he is in a rage, but should wait until he cools off. Nor should one talk to the child just after he has been punished. He is not in a receptive state or, if he knows that he is going to be punished, he is not in a psychologic state in which he can listen or reason.

Most talking to a child is really lecturing. The child is usually not asked to explain his behavior or, if he is asked, it is a rhetorical question and not a real one. The wise parent will sit down quietly with the child and ask him why he did the particular thing that he did and try to understand why this deviation in behavior occurred; then he will decide as coolly as possible whether this is the time that this particular type of behavior should be broken up, whether the other things in the child's training make this an auspicious moment, or whether this is the time when this thing should be ignored.

Parents Should Punish and Forget

Sometimes merely helping a child to talk over his behavior will help him to formulate what he thinks on the subject. We are prone to think that children go ahead with their intellectual processes to themselves in the way that adults do, but it is quite likely that young children do not really think except when they think out loud. Honestly asking a child why he did such things is helping him to formulate in his own mind his reasons for doing them, and often his judgment will help him not to repeat the act.

When the punishment is over it should be over, and the parents should forbear any period of righteous indignation. They should punish as inevitably, under certain circumstances, as a stove would burn, and it should be brought to the attention of the child that if he touches the stove again the same thing will happen. The stove will not weaken. The stove will not repent. If an hour after being burned he again touches the stove, he will again be burned, but, fortunately, the stove will not pout in between.

It is often found that to praise the successful act and ignore the unsuccessful is the most effective way to get results.

In the kindergarten clinic for nervous children, where we had the opportunity to study children for several years, we found that a certain type of reaction with

Physical punishment should be sharp and short, such as a slap on the hand. After a child is 5 years old, it should not be necessary.

regard to food could be built up easily in this way. Those children who had had milk for breakfast were asked to stand up. Those who stood up were very seriously shaken hands with. Much ado was made over the child who had had milk for breakfast. The one who had not had milk for breakfast was permitted to sit unnoticed. It would have been the easiest and simplest thing in the world to have said, "Why, John, to think of you not having milk for breakfast! Of all these children, we expected you to be the first to rise."

This would have given John a definite type of reward for bad behavior. He would have had attention, which is the child's most precious reward, and with attention he would have tried, being an intelligent child, to get it again by the simple expedient of not drinking milk.

"I Told You So" Is Bad

Children, as well as adults, resent having "I told you so" thrown at them. This was the type of discipline used with John, who had changed from being a happy, laughing, contented small boy into a disobedient, irritable, surly boy of 8.

His mother said, "I don't know what is the trouble with John. I always reason with him and try to show him the error of his ways. Now last September he did not want to return to school, because he had a new teacher. He said, 'Mother, I don't want to go to school, because our new teacher is so strict'; but I said, 'Oh, John, you must go to school, and I'm sure you will grow to like your new teacher before the month has passed.' And sure enough, before the month was out, John came to me and said, 'Mother, I really like my new teacher. She isn't strict; she is awfully nice.'"

Then the mother violated all the principles of good training. Instead of saying, "That's fine! I'm glad you like your teacher," she said, "Well, that's just what mother told you would happen. You see it is so much better to take mother's advice; she always knows best."

One mother said, "My little girl of 5 is quick tempered. When she does something I dislike, I put her on a chair to think over her misdeeds. When she is repentant of them, I let her off the chair. What do you think of this for punishment?"

This is unwise punishment. A child of 5 is not old enough to be benefited by thinking over her sins. This type of punishment simmers down to two things: physical confinement and prolonged psychologic punishment.

Another child of 6 has a way of telling fantastic stories. In order to break him of this, his mother puts him in a closet for an hour or two. The object of punishment in this case should be to get the boy to quit living in a world of dreams. When his mother locks him in the closet, she merely gives him a glorious hour or two in which to indulge his day-dreaming tendency.

These are examples of failures in discipline. Let us take an example of success.

A boy of 3 was in the habit of undressing in the front yard. He was told he should not do this. The next time he undressed he was brought in the house and told, "When you pull off your clothes, either one of two things will happen: You go to bed, or you take a bath." In order that he might remember, he was given a trial at both of them. He was put to bed for five minutes; then he was given a bath. He was scrubbed thoroughly with soap and brush. He was wiped off with a rough towel and put in some clean, starched, stiff clothes. None of these gave him any pleasure. That was the last time he removed his clothes in public.

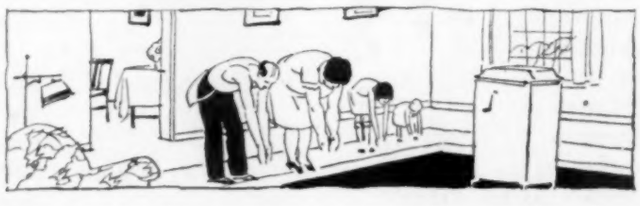
Parents must have a well thought out program of behavior. They must try to see behavior from the standpoint of the child and his knowledge. They must simplify their lessons, giving only one habit at a time, and be game enough to ignore other things that are going wrong unless the process is going too far.

They must have a philosophy of life, a philosophy of what they wish for the child in the way of total behavior, and a philosophy for themselves that permits them to accept failure without a feeling of being personally thwarted. They must realize there is a given capacity for each year, and that they cannot expect a 5 year old to behave like a 7 year old child.

Age Brings Solution of Many Problems

There are many things that no discipline on the part of the parent can give, but that age itself will give. We spend years trying to teach children to sit still, without success because nature tells them to move. When maturation of the nervous system occurs and they get so they can sit still, we point to them with pride and say, "See, what we have done." The result has been obtained in spite of the effort.

Children cannot be brought into the world and handled as an emergency problem. There must be a program. There must be an actual working method. There must be a curriculum for the development of their best behavior.



Weighed, measured and physical defects corrected, children are then ready for mental work.

Linking School *and* Home

By

ISABEL P. HAGGERTY

WHEN the classroom teacher becomes really acquainted with her children, she knows about their parents, because the children like to talk about parents and brothers and sisters.

With the technic used in handling other subject matter, the teacher in giving health education utilizes what the child brings to her. In directing the development of each child in her room, she makes use of the group forces and values within the class and through these secures a natural relationship among mother, child, teacher, nurse and doctor.

In linking school and home in cooperative guidance of the children's health, the teacher finds that cooperation of the parents can be easily secured through resources that are presented in every classroom. These resources are a biographical glimpse of the children's background, and classroom activities that carry over and function in the home. In addition to these two, the nurses' activities in the school and in the field contribute.

The teacher does not know the children until she knows something of their environment. Through a questionnaire the children tell their nationality, whether or not they speak English at home, whether their parents are living, whether they work, and at what? This throws a reflection on the individual child, and the teacher more sympathetically regards the child "not as he is but in the light of what he might become."

In a program that provided but little time for health education it is interesting to see the possible correlations and activities that manifested themselves throughout the school day.

The area of activity with which I am most familiar is a fifth grade in the Passaic public schools. In this grade practically all nations are represented, forming one large family determined to follow the rules of the health game, in addition to having all physical defects corrected.

Scales, tape measure and weight chart formed a new and interesting triad in the classroom. The children knew their weight, how much they should weigh for their height and age, and how much they should gain. Every child weighed himself; the children took one another's height. Each child put his individual record on the classroom weight and height chart, so with such a starting point as interest in weight and height every activity in the classroom lent itself to correlation with health education. These activi-

ties automatically carried a message of health into the homes and secured unconscious cooperation from parents.

Every morning at the meeting of the health club, class inspection took place. The children were given credit for definite points, such as clean skin, hair, teeth and hands. It was not long before the children talked things over with their parents, and cleanliness became one of the points in which there was great rivalry among the children.

With a great deal of enthusiasm, the children looked forward every morning to the three minute speeches by the members of the class, their own suggestion for making the club more interesting. One girl reported on the way her mother cooked oatmeal. Another told the number of prunes in a pound, how to cook them and how many members of the family they would serve. The children exchanged recipes and ideas and took them home. At many of the health club meetings, a parent or two was present. On occasion the children felt that what they had to contribute was entirely too good to be given without the nurse or principal hearing it, so they too were frequent visitors to the class.

An Italian mother came to the classroom one day to tell the children how Italians prepared spaghetti; the next day a mother whose husband keeps a large fish store talked. She insisted on having the children go to the store to see the different kinds of fish. Her boy was happy to see his parents interested in his class and to see the children write in their notebooks the names of the fish in his father's store that had been caught in the ocean, and the names of those that had been caught in lakes and rivers.

At the health club we discussed the rules of the health game. That some rules were harder to follow than others, was the opinion of many children, so we planned means to make them easier to follow. "A full bath more than once a week" was one of the rules that necessitated much shifting of method. Children's statements showed that home conditions were complicated at times. The children were honest about the situation at home. They would tell that they did not have a bathtub and that sometimes it was necessary to go to the cellar for the wash tub, or that the bathroom was not heated except on Saturday night for the regular baths. Sometimes the whole family sat around in the only available room. But the children discussed the matter with their parents, told them that a full bath more than once a week was one of the rules of the game, and they wanted to play the game without breaking the rules. In most cases the mothers seemed reasonable and helped the children adjust things.

Through the entire day's program health education was made to permeate every lesson, not as health education, apart from the other subjects, but as a strong undercurrent directing and swaying the main stream of thought and leading the children into desirable health attitudes and into knowledge which they in turn initiated in their homes.

With the regular prescribed course of study these were some of the possible correlations and activities that were used to reach the children's homes:

Singing and Music Appreciation.—Breathing exercises were joys to the children, not labor. A two minute rest before singing also was healthful as well as pleasurable. Parents were invited by the children to visit the class at any time, and frequently the parents came to hear the song that the children sang. Many of the songs carried messages of health.

Arithmetic.—Problems seemed more real when they were related to things that were vital in the life of the child. Some problems involved calculation of weight and gain. We had such problems as: "Oranges cost 60 cents a dozen. There are six members in our family; each member has one-half an orange for breakfast each morning. What is the cost of the oranges that our family uses for one week?"

For home assignments the children would find out how much material, for instance, their mother would use to make an individual towel for each child, or how much a lunch would cost that we had planned in the classroom. Monthly gain was calculated for the report cards and weight charts. Sometimes such problems as, "Michael goes to bed at 9 o'clock, sleeps with his windows open until 7 o'clock. What part of a day does Michael sleep so that his body will become stronger?" The planning of these problems at home naturally catches and holds the interest of parents.

Language.—Language correlations were possible all through the day, but in the particular language periods we had such topics as, "What Makes a Boy or Girl Grow?" "What Keeps a Boy or Girl from Growing?" and "Why I Am Drinking Milk Instead of Coffee or Tea."

Original Verses.—Parents were always happy to get messages from their children and especially so when the children showed enthusiasm in them. On St. Valentine's Day instead of the usual messages of love the children originated verses and printed them with pride in the valentines that they sent to their parents. A particularly interesting one ran thus:

> If you love me help me grow,
> Give me milk and added weight I'll show.

The mothers cherished such simple work done by their children. It was not long until the family knew that milk was the master builder, and that a pint a day should be the minimum amount for use. Vegetables and

fresh fruits and their effects on the body soon became a natural topic of discussion in the home. Fathers and mothers became interested in the children's activities, and before long they too were playing the game of health.

Letters written by the children were sent from the school to parents telling them the importance of having perfect teeth. A post-office was provided in the classroom for the answers to these letters. Those not in English were translated by a child who understood the language. Each child wanted an answer to his letter, the answer giving permission to have his teeth put in good condition.

We had a newspaper called the Daily Health News. An editor was selected by the children and the entire class served on the editorial staff. Contributions were received from the parents and were given careful consideration. Many of them were published.

From a schoolroom post-office, children in this Passaic public school mailed letters to their parents requesting permission to have teeth defects remedied. The parents replied and soon there was not a neglected tooth in the whole room.

Oral Language.—Parents reacted well to the oral language work of the classroom. The children practiced at home three minute talks on the value of sleep, the importance of having good teeth, and keeping the clothing and body clean. Two children were invited to speak before classes in other rooms on the importance of good teeth. With a long mirror in his hand and a companion with teeth delightfully clean, one boy, after his talk, had the children come forward and, if their teeth were clean, gave them the privilege of glancing in the mirror. After these talks the dental clinic was frequented by the children of the lower grades.

Health Play.—A play was planned by the children to show the importance of keeping the rules of the health game. The children talked the play over with their parents and discussed the costumes. Some made costumes representing the new vegetables they had learned to eat; others wore costumes representing the rules of the game. The parents helped to fill colored cloth carrots, cut paper tomatoes, and provide the necessary trimmings for the play. The children wrote invitations to parents and friends. Later the Rotary Club invited them to present their play at one of their noon lunches.

Geography Project.—"New Jersey's Contribution to the Health of the Nation" was a project worked out on the sand table under the divisions of the rules of the game. The sand table had such displays as bath tubs manufactured in New Jersey; soap, of course, and plenty of pure water; tooth paste and brushes; happy looking people going to work and to school; and means of transportation. Dairy products, safety regulations and well furnished homes were shown, many of these having been inspired by the parents or perfected with their help.

From empty seed envelopes they made weight booklets. The cover of a booklet on milk furnished the cows for the New Jersey pasture. Children who were normal in weight were in the pasture, while those not up to weight were outside. In connection with this project the children obtained a piece of sheep skin. They cleansed and carded the wool, a grandmother having come to the class to show the old fashioned way of spinning. The children then dyed the wool and made parchment from the skin. Some one suggested that those having perfect teeth be allowed to write their names on the parchment. It was not long before all the children's names were on the honor roll.

Health education was also correlated with art, spelling and history. The parents shared in the activities of the classroom, they enjoyed the outcomes of the class program and felt they were part of it. They were proud when their children were up to weight, had all physical defects corrected and showed improvement in their school work as well as in their manner of living.

The nurse handled cases with which the classroom teacher had difficulty. She constantly followed up cases, not once but until the children and the parents no longer needed her guidance. She took groups of children to dental clinic and hospital. Through the nurse the parents often made their first trip to the school, and because they all knew her from her visits to their homes, the bond between the classroom and home was made stronger.

More Health Photos Submitted in Hygeia Contest

Submitted by Sisters of Mercy, St. Berchman's Seminary, Marion, Iowa.

Mary Wheeler Walker, daughter of Mrs. W. C. Walker, Rye, N. Y.

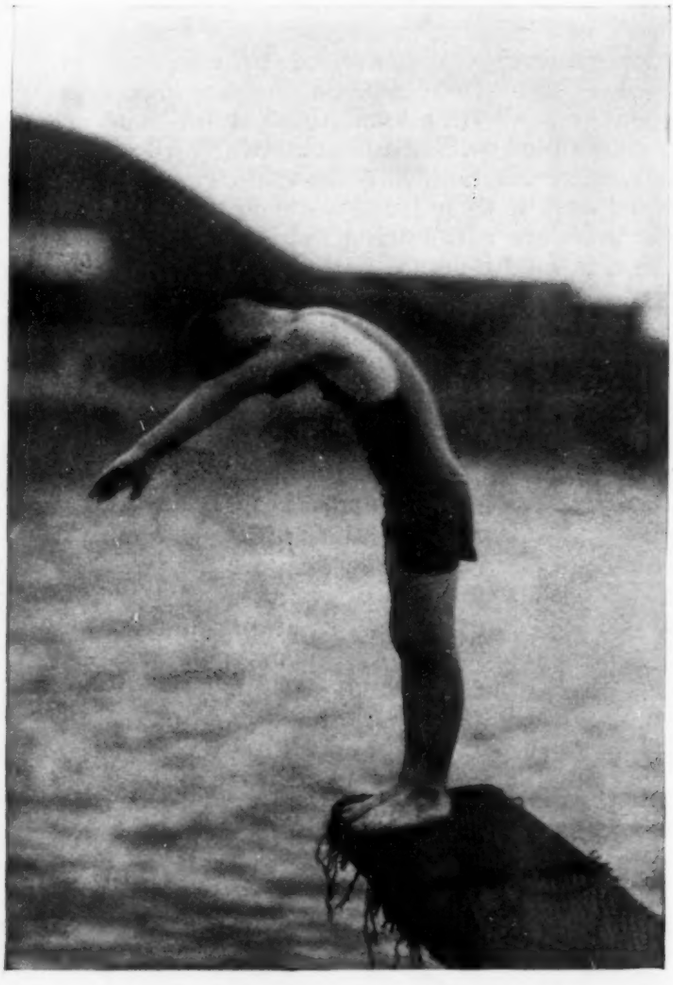


Photo of Frederick Strong, Jr., Denver, Colo.

Photo of Byron Faust, submitted by Mrs. Harry Faust, South Bend, Ind.

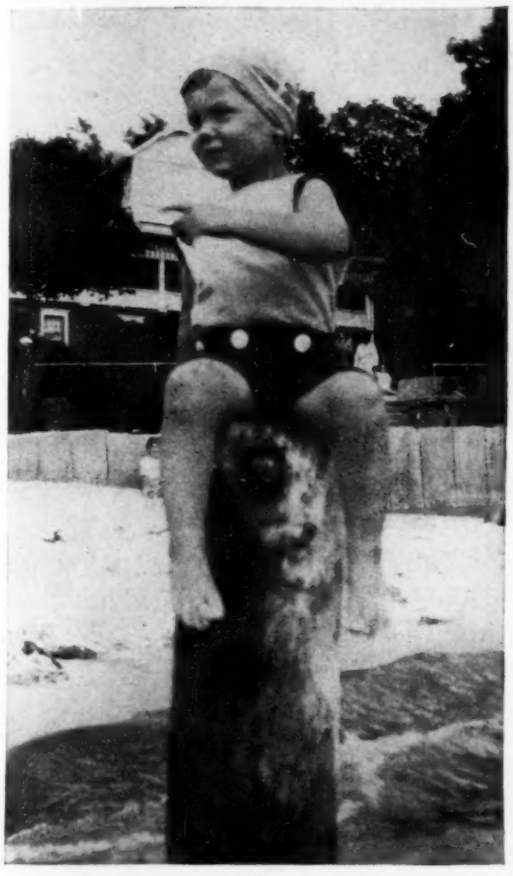


Photo of Robert Lifschutz, son of Dr. J. Lifschutz, Chicago, Ill.

Photo of Katherine Elizabeth Sanger, San Mateo, Calif.

Submitted by Limestone County Health Unit, Dr. L. R. Murphee, health officer, Athens Ga.

HYGEIA
THE HEALTH MAGAZINE
Published by the American Medical Association
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Plain Facts about Health and Disease

HEALTH NEWS OF THE MONTH

Eating and Heart Disease

Angina pectoris, the chief manifestation of which, from the patient's point of view, is severe pain in the heart, is one of the most distressing conditions that afflict mankind. The heart, like other organs of the body, is supplied with blood through arteries. When these blood vessels become changed as the result of disease or obstructed following infection or by some mechanical factor, the nutrition of the heart suffers; changes take place in the muscles and in the nerve regulation of the organ with symptoms that are serious. Sometimes improvement occurs through the taking up of the circulation in the heart by other vessels, and these compensate for the weakened ones. In other instances, the tissues are destroyed.

The physician who is confronted with the care of such a patient cannot, of course, build new organs or tissues to take the place of those that are deficient. He can prevent further infection in the heart by removing the foci of infection from which the bacteria have been carried, and he may build up the patient's health to an extent that will enable him to overcome much disease.

Careful observation has revealed the fact that pain in the heart in persons with angina pectoris is likely to come on soon after a meal. Sometimes when death occurs suddenly from this disease it is found that the patient has just partaken of a large amount of food and the vomiting of a large meal previous to the onset of severe pain may be a symptom of a serious condition. Physicians who have made postmortem examinations on the bodies of persons dying suddenly of angina pectoris not infrequently find the stomach distended with food.

The warning is clear. Persons with angina pectoris should eat sparingly, or should take only a little food at frequent intervals. The stomach must not be overloaded with a bulky or heavy meal. When the blood vessels that supply the heart with blood are diseased, a slight bending upward of the heart by a distended stomach may so interfere with the circulation as to cause the sudden onset of severe pain.

Relation of Light to Sight

The British government, through its Medical Research Council, undertook a complete investigation of our present knowledge of the relation of light to the ability to see well. It has been found that glare seriously interferes with good vision, indeed, almost as much as insufficient illumination.

When the eye is fixed definitely on a certain object, it is found that it becomes tired more rapidly without illumination than when the illumination is bright. However, glare must be avoided under such circumstances by proper placing of the lights and by the use of suitable shading. A lamp shade should be wide enough to throw the light over a considerable area. The disability produced by a frosted bulb is practically the same as that produced by a clear lamp of equal candle power.

Tests made in various manufacturing concerns have shown positively that increased illumination with a minimum of glare and of objectionable reflections will greatly increase the output of work. Traffic accidents at night on a busy street in one city were 17 per cent less after the installation of a good lighting system. It is, of course, apparent that the opportunity for crime is lessened and that traffic moves much more easily with proper illumination.

Studies on Perspiration

When the human body is exposed to a raised temperature, particularly in the presence of a certain amount of humidity, it sweats. The temperature of the skin is usually at a little lower level than that

of the blood. Heat is constantly being dissipated from the surface of the body. When the temperature around the body becomes warm, the blood vessels on the surface dilate. If the temperature becomes too warm, the moisture output of the skin is increased, and cooling is provided by more evaporation. Dry heat is more easily borne than moist heat. If the air surrounding the body is saturated with water, a temperature of 90 F. may be fatal.

Some persons perspire much more easily than others. In addition to the perspiration that is visible on the surface of the body, there is a loss of material from the skin by vaporization that is represented by the term "insensible perspiration." This loss goes on constantly. Dr. F. S. Benedict and his associates in the Boston Nutrition Laboratory of the Carnegie Institution of Washington say that the insensible perspiration has a direct relationship to the metabolism or chemical interchange constantly going on within the body. Persons with diseases of the thyroid gland, whose metabolism is high, were found to have a large amount of insensible perspiration; whereas persons with diabetes, whose metabolism is low, had a smaller loss.

The determination of the basal metabolism is a complicated process as compared with the measurement of the insensible perspiration. If it can be shown that the two factors are closely correlated, it will be possible to use the newer method on patients who may be too ill or not well adapted temperamentally to the usual methods of measuring the metabolism. The measurement of the insensible perspiration involves an accurate weighing of the body. It may seem that too much emphasis is being given to a simple test, yet the determination of the pulse, the respiration and the temperature are equally simple and afford information of great value to the physician. M. F.

EXPERIMENTATION ON ANIMALS

THE public spirit of a periodical may be measured by the willingness to discuss honestly questions concerning which many persons become rabidly angry if not fanatical. Among the leading topics of this character is animal experimentation. The *Atlantic Monthly* in its September, 1926, issue presents a consideration of the ethics of animal experimentation by Prof. John Dewey, whose position as a leader of thought in this country has been established by years of right and clear thinking.

Professor Dewey begins with the premise recognized by every one that cruelty to animals is wrong and immoral. But he points out at once that there is no ethical justification for the assumption that experimentation on animals is a species of cruelty. Indeed, he emphasizes positively the moral principles relating to animal experimentation that may be considered as thoroughly established, and that scientific men may well emphasize to the public:

1. Scientific men are under definite obligation to experiment upon animals so far as that is the alternative to random and possibly harmful experimentation upon human beings, and so far as such experimentation is a means of saving human life and of increasing human vigor and efficiency.

2. The community at large is under definite obligations to see to it that physicians and scientific men are not needlessly hampered in carrying on the inquiries necessary for an adequate performance of their important social office of sustaining human life and vigor.

Professor Dewey, apparently familiar with the propaganda of the fanatical opponents of scientific experimentation on animals, emphasizes the fact that they constantly ignore certain fundamental considerations of public good. The experimenter has the duty of availing himself of every possible resource to make him more competent in the lessening of physical pain, in the promotion of human health, and in the prevention of disease and death. Illness and suffering affect not only the patient himself, but also all of those on whom he is dependent during his incapacity and all of those who depend on him when he is a producing unit in the social scheme. According to Professor Dewey, the question is not merely one of balancing human physical pain against that of animals; it is a question of balancing a certain amount of physical suffering to animals—reduced to a minimum by all of the progress of modern science—against the bonds and relations that hold people together in society. This question can be answered only in a single manner. It is not a decision to be based on sentimentalism. On the correctness of the answer depends the progress of human happiness and civilization.

Professor Dewey recognizes that it is the duty of the state to pass general laws against cruelty to animals. He resents, however, special surveillance of educated men, research workers and physicians, when slaughter house workers, truck drivers, farmers and others, much more frequently in contact with animals, are not submitted to such inspections. "Scientific inquiry," he says, "has been the chief instrumentality in bringing man from barbarism to civilization, from darkness to light, while it has incurred, at every step, determined opposition from the powers of ignorance, misunderstanding and jealousy."

Here, then, is a clear presentation of a problem that continues to be agitated constantly by a vociferous, wrong-minded minority. In his consideration of the activities of the antivivisectionists, Professor Dewey is moved to resentment. Their campaign has not been presented with the fairness and honesty that should form the basis of any attempt at reform, even when definite evils exist. Exaggerated statements, the presentation of conditions without the slightest evidence, the repetitions of allegations that have been repeatedly disproved, vague insinuations and the downright aspersions used by the misguided sentimental women and woman-like men who are the promoters of these societies, have been the inciting cause of constant furors in both state and national legislatures. The endeavors of these publicity seekers to spread their views before the public on every possible occasion have even been the cause of state-wide referendums on a question which should have been settled once and for all with the arrival of the age of reason.

One is inclined, indeed, to wonder whether or not the minds of these opponents to scientific progress are not perverted by some queer seeking of happiness, leading them to take a peculiar joy in dwelling descriptively on scenes of bloodshed and pain that never have existed. M. F.

THE NURSE IN PRENATAL CARE

THE value of sound medical advice for the expectant mother is coming to be more generally realized. The physician can anticipate and prevent many of the accidents of labor and thus conserve the health and not infrequently the life of both mother and infant. Moreover, the future well-being of the child is often dependent on the conduct of the pregnant mother as to diet, exercise and other factors.

Miss Caroline Van Blarcom has recently said that the function of the nurse in the prenatal period is to assist the physician in carrying out the details prescribed by him of supervision, instruction and care of expectant mothers and to induce as many of them as possible to place themselves under the doctor's care from the beginning of pregnancy. Few mothers can afford the services of a private duty nurse during the entire child-bearing period, nor is this necessary, but the visiting nurse, the public health nurse and the "by-the-hour" nurse have here a large field of usefulness.

Strict cooperation with the physician who has been engaged to deliver the patient is most essential. The physician can rarely give the time needed to insure the thorough instruction of the expectant mother in the regulation of her every day life, but the nurse under his direction can make visits with the necessary frequency to insure this instruction and the establishment of right habits of living during this important period.

To insure the fullest measure of success, the nurse must be aware of the high infant and maternal mortality and of the impairment of health that result from the largely preventable conditions associated with childbirth. She should make and record periodic observations of temperature, pulse, and sometimes of blood pressure; she should inquire as to diet, bodily functions and the occurrence of symptoms of undue fatigue or depression. These data should be reported at intervals to the physician.

The great majority of births occur in homes. Even the expectant mother who plans to go to the hospital spends all except the last few days of her pregnancy in her home. With the aid of the visiting nurse, the physician can give her the necessary care at a minimum expenditure of his own time and of cost to the patient.

When such combined service of physician and nurse can be obtained at reasonable cost, it ought to be possible to educate the women of the community to desire and to secure such skilled service rather than to employ the midwife or to have no care other than that of a neighbor. J. M. D.

A NEBRASKA EXPERIMENT IN SCHOOL HEALTH

THE incalculable value of intelligent, purposeful leadership in promoting the health of a community is well illustrated by the experience of Falls City, Neb.

Eleven years ago, crude superficial inspection of school pupils was instituted in that city of 5,000 inhabitants through the initiative of a physician. The demonstration of the value of medical inspection—superficial and hasty as it had to be—was sufficiently impressive to prompt the school board to appoint, in 1917, a physician to act as medical director. He is in no sense a school doctor in competition with the medical profession, but aids by instructing parents in the importance of having mild illness treated early and of having remediable defects corrected. There is no committee on school health to interfere; the medical director is given full authority and is held responsible for the results obtained.

A thorough sanitary survey of the physical conditions is made at the beginning of each

school year and at intervals thereafter. The teachers are instructed about the health program. They are charged to dismiss from school immediately a pupil who is flushed or languid, has cough, coryza-reddened eyes, skin eruption or other departure from normal condition.

In case of doubt such pupil is referred to the medical director, who returns the child to school or sends him home, reporting any suspected contagion to the city health department. Last year 157 pupils were dismissed for possible contagion and 157 possible epidemics forestalled.

In 1917, when the plan was inaugurated, 73 per cent of the pupils examined were found to have defects of teeth, tonsils, thyroid gland, eyes, ears, skin, heart, chest or nutrition. Last year only 24 per cent of the pupils were found with uncorrected defects.

Weighing and measuring the children has been given up because the number of nutritional defects is small, and it has been found possible to detect them by observation. Nine per cent were found to have goiters, which is believed to warrant the administration of iodine to all the children. Eighty-seven per cent have been vaccinated against smallpox, and toxin-antitoxin inoculation against diphtheria is offered to all. The average record for attendance last year was 96.4 per cent, which is exceptionally high.

Such a health plan properly carried out reduces the number of physical defects that remain unremedied, stimulates interest of parents in the welfare of their children, lessens illness among pupils and consequent absence from school, and teaches pupils the value of health and of periodic health examinations.

J. M. D.

ONE HUNDRED YEARS OR OVER

OF ALL the sad spectacles in the field of medical science, none is so provocative of pathetic mirth as the person who suffers inordinately from the will to believe. Pasteur called skepticism the prime factor in the development of a scientist. The ability to investigate the available scientific evidence before coming to a well warranted conclusion is the result only of years of training and practice, preferably in the research laboratory or in the clinic. Such a training has apparently not been the portion of most of those who write on the subject of rejuvenation.

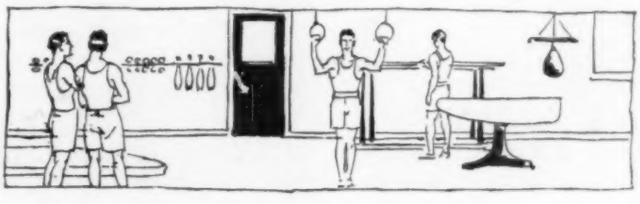
The search for prolonged youth began with Ponce de Leon and passed through the periods of Brown-Séquard and Metchnikoff—the former, a believer in the powers of glandular extracts; the latter, convinced that old age results from putrefaction in the digestive tract. The most recent contributions deal with surgery of the glands and are credited to Lydston, Steinach, Voronoff and Benjamin. None of this work is established, and all of it has been subjected to the severest condemnation by capable scientific critics.

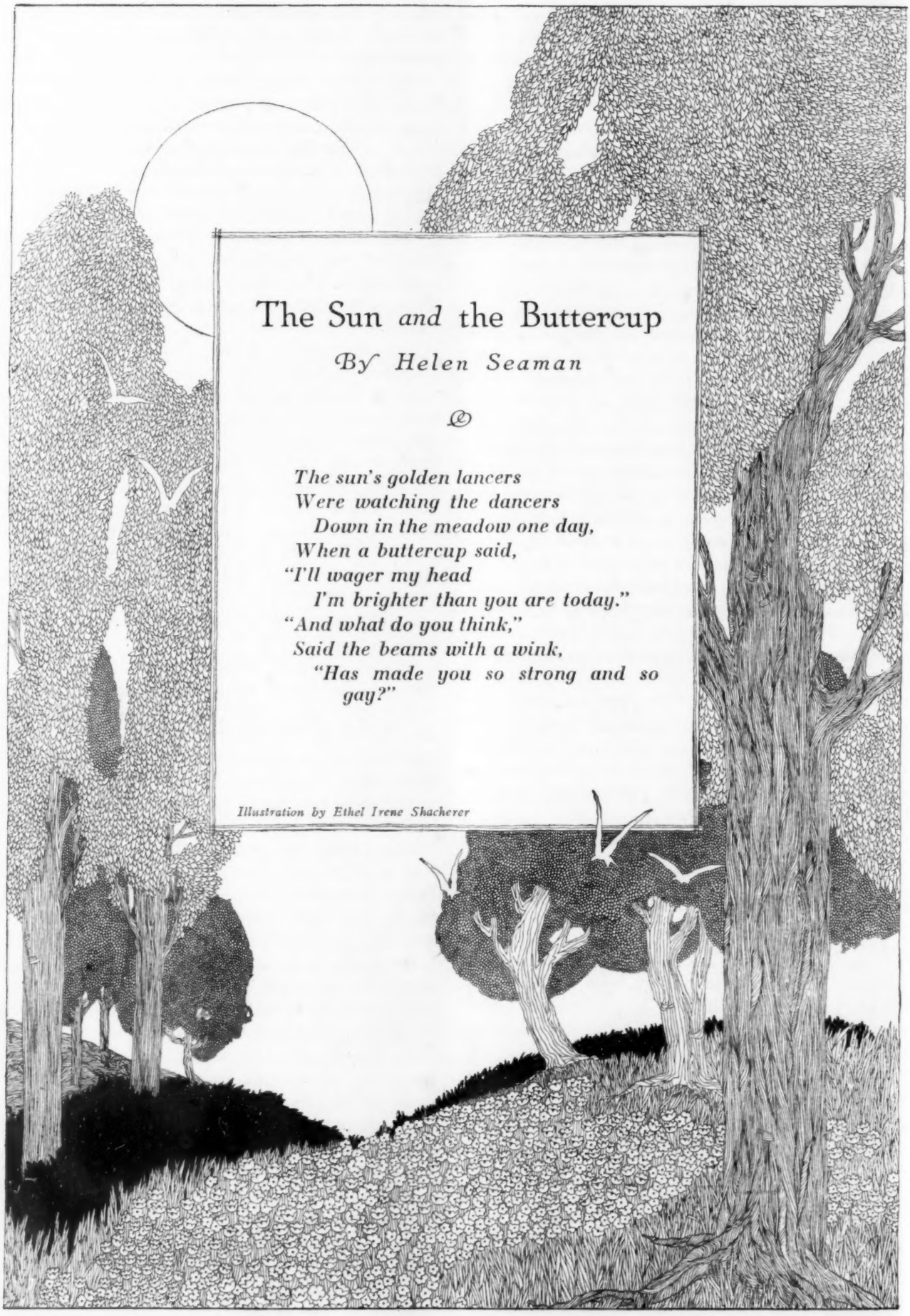
The supreme height of credulity is reached by Dr. Carl Ramus in a recent volume called "Outwitting Middle Age." In his chapter on historical cases of great longevity, he cites case after case of human beings said to have lived beyond 100 years. Indeed, he even criticizes the serious observations of all of those who have studied the question, because they were skeptical when they undertook their studies. Out of 1,000,000 persons whose records were studied there was not one who lived beyond 100 years of age, and there were only thirty who actually lived 100 years, of whom twenty-one were women.

An investigation made by Dr. Raymond Pearl showed that less than five women in every 10,000 ever get to be 100 years old. Dr. Pearl also investigated the records of every person reported in newspaper accounts to be over 90 years of age. Out of 300 such instances accumulated in several years from the entire United States he found only twenty of 100 years of age, eleven being women exactly 100 years of age; one man of 101 years; three men of 102 years, and one woman of 102 years; one man of 103 years; one man and one woman of 104 years, and one man of 105 years.

Actually, reference to all of the available scientific literature indicates that there is not a single authentic instance of a human being who has lived to be more than 105 years of age, and yet Dr. Ramus fills page after page with instances of persons living to 130, 140, 150 and even 180 years, crediting some of them indeed with the power of reproducing at such advanced periods.

M. F.





The Sun *and* the Buttercup

By Helen Seaman

The sun's golden lancers
Were watching the dancers
Down in the meadow one day,
When a buttercup said,
"I'll wager my head
I'm brighter than you are today."
"And what do you think,"
Said the beams with a wink,
"Has made you so strong and so gay?"

Illustration by Ethel Irene Shacherer

The Schoolroom Imps

By
Elizabeth Blaine Jenkins

A HALLOWE'EN PLAY

Cast of Characters

Jane	A-bath-I-never-take
Bobby	Sluggish
Witch	Bad-air
Wiggles	No-vegetable-today
Not-nuff-sleep	Coffee-bean
Skinny	Tea-leaf
Not-nuff-milk	Like-candy-more-'n-fruit
Timmy-toothache	Ate-a-lotta-ice-cream
Forgot-to-take-a-drink	Chocolate-cake-to-boot

[*As many more imps may be added as necessary to give each child a part.*]

SCENE: Bobby's back yard. Back door and steps of house at right. An apple tree left center. Shadowy orchard at rear.

TIME: Moonlight on Hallowe'en.

[*Enter Bobby and his sister Jane. They walk on the tips of their toes, looking furtively to the right and left. The children off stage make a sound like the night wind.*]

CHILDREN: Woo-oo-oo! [*They twitter like screech owls.*]

JANE [*afraid*]: Say, the wind sounds spooky, doesn't it, Bobby?

BOBBY [*calmly*]: It's supposed to sound spooky on Hallowe'en.

CHILDREN [*off stage*]: Woo-oo! Crick, crack, crick, crack.

JANE [*shivering*]: The trees don't crack like that in the daytime. It must be an old witch cracking her broomstick!

BOBBY: More than likely it is a lot of witches cracking a lot of broomsticks, or an imp cracking its tail. Granny Jones said witches and goblins and imps are snooping around every place on Hallowe'en. They are planning their devilment for the next year.

JANE [*awed*]: Wh-what devilment?

BOBBY: Oh, just tormenting folks. [*He turns about suddenly and listens intently.*] Wh-sst! Sh! Did you hear something go Swish-swish-swish behind the apple tree?

JANE [*excitedly*]: Do you suppose it is a witch swishing her broomstick?

BOBBY [*pleased*]: Maybe it is a goblin swishing his long, long ears. Granny said the minute we hear swishing we should say the spell.

JANE [*uncertainly*]: W-wait a m-minute. I'm scared.

BOBBY [*disgusted*]: Gee, I hope you're not getting scared before we even see a witch. Here I learned to say the spell so we could see an honest-to-goodness one, and you go and get scared.

JANE [*defiantly*]: I'm not scared, it's only my knees are scared. Say your old spell, and I hope an awful witch will jump out of the apple tree, one with green eyes and skinny fingers as long as from here to the upstairs window—and—

BOBBY [*uneasily*]: Aw, you needn't describe her, let her describe her own self.

JANE: She can't describe herself until she gets here.

BOBBY: Well, are you ready? You have to stand on your head while I say it, or it won't work.

JANE [*bravely trying to do so*]: Hurry up and say it while my legs are in the air! [*Jane tries to stand on her head while Bobby recites the spell.*]

BOBBY:

"This is the nicht o' Hallow e'en
When all the witchie mecht be seen
Some o' them black and some o' them green,
Some o' them like a turkey bean."

[*A chorus of wierd sounds is made by the children off stage. Some imitate the cry of cats, others mimic the hoot of owls; the rest of the children make sounds like the screeching of imps, goblins and mischievous elves.*]

BOBBY AND JANE [*frightened very much*]: Oo-oo! [*The old witch, astride a broomstick, leaps from behind the apple tree. She prances around on her broomstick making a quavering noise in her throat, then stops in front of them.*]

WITCH [*in a thin eery voice*]: Well, here I am! [*There is an awesome silence.*]

WITCH [*louder*]: I say—here I am. [*She beats the ground with her broomstick.*] Broomstick and all. Did you expect two of me? You did not stand on your head very well so it is a wonder that I have come at all.

BOBBY: One of you is quite enough. [*He backs away from her.*]

WITCH [*scornfully*]: Humph! [*Bobby and Jane jump in fright.*]

JANE: We didn't expect you so—s-soon.

WITCH [*louder*]: Humph! [*The children jump again. The witch ties her broomstick to the apple tree.*]

WITCH: Well, speak up! What do you want me to do? I can't waste time here when I might be flying over the church steeple or brewing my magic pot.

JANE [*more boldly*]: We should like to see something scary, so we can tell the children at school. [*The Witch, with a flourish, takes a magic pot from beneath her robe and places it on the ground, where it hisses and smokes. Incense can be used for this. The children step back several paces, uneasily watching the pot.*]

Did you hear something go Squish-swish-swish behind the apple tree?

WITCH [*rubbing her chin thoughtfully*]: So you go to school? Then you should see my school imps. In what grade are you?

BOBBY: Second Grade in Adams School. [*Substitute particular school and grade of the performers.*]

WITCH [*grinning maliciously*]: I have plenty of imps in that school.

JANE [*protesting*]: We don't have any such thing!

BOBBY: I never saw an imp in school, or any place else! I don't believe there are any imps.

WITCH: Humph! Well, wait about two shakes of a goblin's tail, and I'll show you several imps. [*She stirs her pot industriously.*]

JANE [*frightened*]: But wh-what did they do—in our school? Perhaps you had better tell us about them first.

WITCH: Perhaps. Well, they did aplenty. They bedeviled almost every little boy and girl in your room every day last year.

BOBBY: That sounds fishy.

WITCH: Don't interrupt. [*She shakes her fist at him.*]

JANE: Did your imps bedevil me?

WITCH: They did. Skinny bedeviled you, and Wiggles bedeviled Bobby.

BOBBY: If he does it again I'll punch his head!

JANE: You can't punch what you can't see.

WITCH: That is quite right.

BOBBY: Why did you call him Wiggles?

WITCH: Because he is Wiggles. He makes children wiggle in study hours; then they can't learn to say their lessons.

JANE: Bobby wiggles. Teacher says so.

BOBBY [*defiantly*]: Well, I wiggle sometimes because I want to wiggle. Nobody wiggles me.

JANE: You told teacher you could not help it.

BOBBY: Well, suppose I did! She said I had been to the picture show too often and hadn't had enough sleep.

WITCH: Teacher is right. In fact she couldn't be righter. All my imps have a little black twin, and Wiggles' twin is Not-nuff-sleep. Now I'm going to show you my little school imps [*she stirs the pot*], Wiggles and Skinny and all the rest of them.

[*Queer sounds are heard as she mumbles a charm over the magic pot. Bubbling, hissing and moans.*]

Tinky, tinky, tanky, tunk,
Pinky, pinky, panky, punk,
Hiss and bibble babble bubbles
Conjure up my imps and doubles.

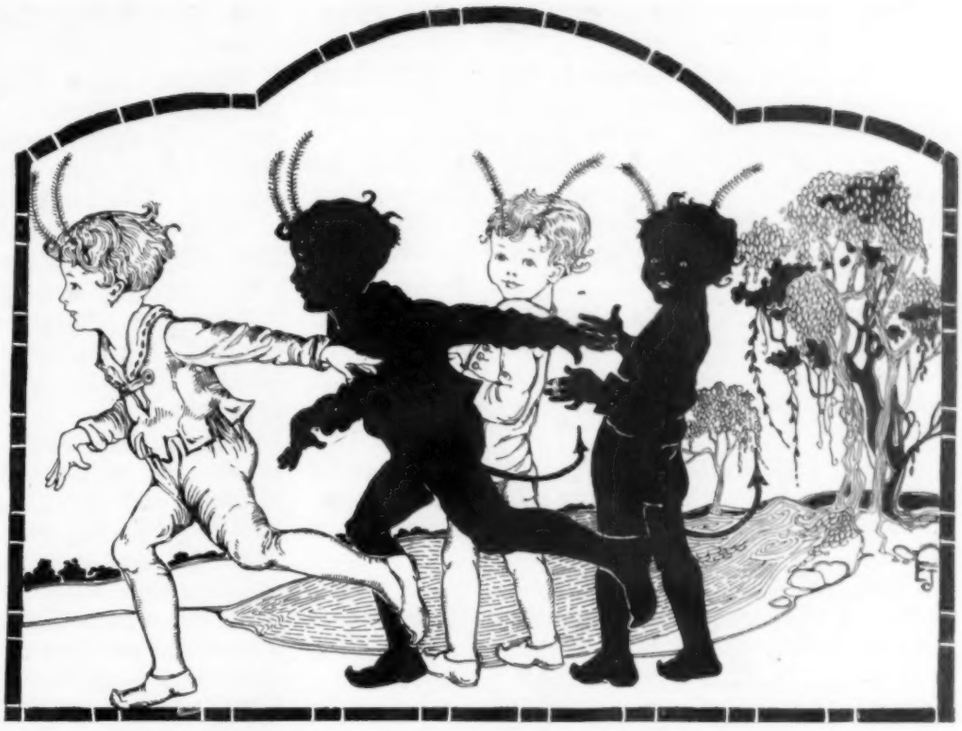
WITCH [*stirring again*]:
Wiggles and Skinny and Timmy-toothache,
Forget-to-take-a-drink and A-bath-I-never-take,
Sluggish and Bad-air, No-vegetable-today,
Come with your twins; show your faces right away!

Coffee-bean and Tea-leaf, Like-candy-more-'n-fruit,
Ate-a-lotta-ice-cream and Chocolate-cake-to boot,
Witchie-mother wants you to dance for Bob and Jane;
Skip around the magic pot and weave your spell again.

BOBBY [*whispering loudly*]: Did you get that, Jane, about weaving a spell? They need not try to weave spells on me!

JANE: Nor on me either. I should not like to be wove on.

[*The pot hisses, there are implike whoops and shrieks, and the imps enter, hopping two by two. Each imp acts out his name. Wiggles fidgets, Not-nuff-sleep yawns, Toothache holds his jaw, which is puffed up with air, Ate-a-lotta-ice-cream carries a big brown paper cone, etc. They hop, two hops on the right foot, two on the left, in a circle around Jane, Bobby and the Witch and her magic pot. When they have circled three times they stop, still holding hands. In all the following action the imps never let go the hands of their shadow-imps. Wiggles with his partner Not-nuff-sleep runs to Bobby's side and slaps him vigorously on the back. Bobby frowns.*]



Each little imp had a shadow-imp that followed him about.

WIGGLES: Here's my old friend Bobby, best wiggler I have. This is my twin brother, Not-nuff-sleep.

BOBBY: Never—saw—you—before. [*The imps bow mockingly.*]

JANE: I'm not one of your wigglers, because I go to bed at 8 o'clock. [*She makes a face at Wiggles.*]

WIGGLES [*merrily*]: You belong to Skinny. Come up, Skinny, and meet your friend Jane. [*Skinny and his twin bow mockingly and very low.*] This is his twin, Not-nuff-milk.

JANE [*triumphantly*]: I'm drinking it now since teacher told me I am underweight.

WIGGLES: Underweight means Skinny. [*Jane looks at her legs ruefully. The imps laugh derisively. The old Witch laughs screechingly.*]

IMPS: Hee—hee—haw—haw. Jane belongs to Skinny. [*They join hands and skip in a circle around the Witch and Bobby and Jane, who form a circle of three within the larger circle, and perform the steps just as the imps do.*]

IMPS [*all together*]:

Two little imps were green, green, green.
One little imp was black.
Every little imp had a thorny tail
That curled up over his back.

Every little imp had a twin, twin, twin
That followed him about.
Each little imp had another little imp
That he couldn't live without.

Every little imp could walk like this [*Exercise I*]—
One two, one two, one two;
Around and around in a magic ring
Just as the goblins do.

Two little imps could stretch their necks [*Exercise II*]
This way, this way, that.
Every little imp could nod his head
Like Witchie's big black cat.

Two little imps could dance, dance, dance [*Exercise III*],
One little imp could hop,
And one could whirl on his heel and toe
Like a dear little, queer little top.

Two little imps could gallop [*Exercise IV*],
Two little imps could trot.
Every little imp could run, run, run
'Round Witchie's magic pot!

BOBBY AND JANE: Whew! [*Bobby, Jane and the Witch sit in the middle of the ring, the imps sit in a circle around them.*]

JANE: Mercy! Let's get our breath. [*Exercise V.*]

[*The imps move backward, enlarging the circle; each imp whispers to his shadow-imp. After each whispered word, they laugh loudly.*

They expel all the breath from the lungs (Exercise VI).]

BOBBY [*in a loud whisper to Jane*]: I believe they are trying to weave a spell on us, with their old ss—ss—ss. [*He mimics their whispers.*]

JANE: If they do I suppose we shall be bothered with Wiggle-imps and Skinny-imps and Not-nuff-this-and-thats all year. Then we can't get our lessons, and that's a dreadful thing!

BOBBY: I know it's dreadful. Only bean heads like Jimmy Brown can't get lessons.

JANE [*uneasily, as she points to imps*]: Well what shall we do? They're nearly ss—n' their heads off.

BOBBY [*cautiously*]: We can weave spells too. Listen! You remember what teacher said about Wiggles and Toothache and all the rest of them?

JANE [*thinking hard*]: Why—why—she said —they'd all disappear like magic if we'd use Health Rules.

BOBBY: Well, magic is a spell, isn't it? Let's borrow the Witch's broomstick and weave a spell on them out of our Health Rule Rhyme.

JANE: Why, Bobby! You've pretty near got sense! [*They face each other, link their fingers together and leaning backward as far as they can, they whirl around and around, singing la, la, la, triumphantly. "Grind the coffee" step.*]

WITCH [*suspiciously*]: What are you acting like that for?

JANE: Why, we're trying to fly around like you do on your broomstick. You ride bee-yutifully, Mrs. Witch.

WITCH [*delightedly*]: I certainly do ride well, but I don't fly around like that. I sit *so!* [*She poses in a dignified position on her broomstick.*] Most witches look very awkward on broomsticks! Would you like to try it? [*She politely offers her broomstick to Jane, who jumps astride it. Bobby jumps on behind her. They gallop around on the broomstick shouting the Health Rule Rhyme.*]

BOBBY AND JANE:

We're going to take a bath twice every week,
And brush our teeth every single day;
And sleep with the windows wide, wide, wide
Just as the Health Rules say.

[*The imps, alarmed, jump to their feet and listen intently. Bobby and Jane recite a second verse.*]

We're going to drink milk without coffee or tea,
Eat vegetables and fruit every day,
And play out doors in the sunshiny air
Just as the Health Rules say!

[*Bobby and Jane chase the imps, who break the circle and run away, two by two. Each pair of imps shriek in fright and hide behind the first shelter they can find. The old Witch seems amazed.*]

WITCH: Here, Wiggles! Toothache! What's the matter with you? [*She hobbles after Wiggles and pulls him forward by an ear, while the other imps peep fearfully from their hiding places.*] Did I ever allow you to be 'fraid cats?

WIGGLES: But didn't you hear that Health Rule Rhyme? [*He shivers in fright.*]

WITCH: Of course I heard it; I have ears.

WIGGLES: Well, that rhyme is a terrible enemy! It's a charm that finishes imps like us. If they keep on with that you won't have an imp left.

WITCH: So *that's* it, is it? Well, what good is an old witch without imps, especially on Hallowe'en? I'll fix them, I will. [*She shakes her fist at Bobby and Jane.*] I'll turn them into horned toads and put them in my magic pot! [*She hobbles after Bobby and Jane, who shriek, drop the broomstick and run as fast as they can. The witch and her imps chase them around and around the apple tree, and at last Bobby and Jane run up their back steps and fly through the back door. The old Witch shakes her fist at them as they peep through a crack in the door and the imps huddle in a frightened group behind her. They form a chain behind the old Witch. The first two hold to the tail of her skirt, the second pair put their hands on the shoulders of the first two, holding them at arms length. The others complete a chain behind the old Witch, and prepare for flight.*

BOBBY [*peeping through the door*]: If you don't beat it I'll say that Health Rhyme ten thousand times. We are going to do exactly what it says every day this year, so you need not send your imps to our school ever again! [*The imps shriek in fright. The Witch clucks to her broomstick, shakes the reins and with a shriek she gallops away. The imps gallop behind her. Bobby and Jane open the door cautiously and sit down on the back step.*]

BOBBY [*after he is sure that the Witch and her imps have completely vanished*]: We shall certainly have a lot to tell the children at school tomorrow.

JANE: Do you think they will believe us, Bobby?

BOBBY: People have to believe things that are so, and what is so-er than school imps?

CURTAIN

EXERCISE 1.—Walk slowly, drawing the knee upward and inward against the body at each step. This exercise is recommended to prevent or relieve constipation.

EXERCISE 2.—Turn the head as far to the right and left as possible, stretching the muscles well. Repeat this motion, nodding the head backward and forward.

EXERCISE 3.—Use any simple step, such as the running step without forward motion. The hop and pirouette follow. To execute the pirouette, place the toe of the right foot back of the left foot, and whirl the body around once.

EXERCISES 4, 5 and 6 are explained in the verses. Exercise 5 should include ten deep breaths, and Exercise 6 should expel the air thoroughly from the lungs.

New Books *on* Health

Reviews of Interest to General Reader, Parent and Teacher

A HEALTH EDUCATION PROCEDURE FOR THE GRADES

By Kathleen Wilkinson Wootten. Pp. 420. Cloth. Price, $1.00. National Tuberculosis Association, 370 Seventh Avenue, New York.

MRS. WOOTTEN has made a real contribution to health education in this volume. The book is divided into two distinct parts, Part I dealing with subject matter needed by the teacher of health. This section is planned so that it may be used as a textbook in teacher-training institutions. Part II outlines courses in health work for the different grades. This answers one of the most frequent requests from the teachers already in service.

The author herself realizes the difficulties to be faced in recommending a course of study that may be followed in any school. She states that the course has been in use for about six years, and has been tested out with a group of 300 children in the Practice School of the Georgia State College for Women, where Mrs. Wootten is professor of health. After using the course for six years, they find it necessary to make "a careful survey of the personnel of each grade at the beginning of every school year, so that changes may be made to meet the specific needs of the children in each group."

Throughout the book the author places the responsibility for health teaching squarely up to the classroom teacher and stresses good health of the teacher herself as a desirable foundation for the work. There are chapters on school hygiene, health supervision of the school child, physical education, safety education, parents' part in health education, physiology, posture, poisons, speech defects and sex education.

The chapter on health supervision includes some thirty pages devoted to common defects of school children and common infectious diseases, with their care and treatment, and the chapter on posture gives details as to diagnosis, prevention and treatment of common orthopedic defects. There may be a question in the minds of some readers as to whether a book intended for teachers should give so much space to specific suggestions for treatment. The author considers that the teacher occupies a strategic position in the control of diseases through education of children, parents and the public in general, and that a thorough knowledge on her part is necessary.

An appendix lists organizations from which teachers may secure free or inexpensive health material or literature. There is also a bibliography on mental hygiene.

M. W. T.

THE DIABETIC LIFE

By R. D. Lawrence. Cloth. Pp. 161. Illustrated. Price, $2.50. P. Blakiston's Son and Co., Philadelphia, 1926.

THIS little book contains plain, scientific directions concerning the diet of diabetics. So far as the reviewer has observed it contains no error and no exaggerated statement. It will be useful to intelligent patients and will aid the doctor in directing the dietetic treatment of his cases.

V. C. V.

WHY WE BEHAVE LIKE HUMAN BEINGS

By George A. Dorsey, Ph.D. Cloth. Pp. 484. Price, $3.50. Harper and Brothers, New York, 1925.

THE philosophy of human existence held by many persons inclines to the belief that man is unable to think or act for himself, and that he is completely a creature of his fate. The scientific view leads to the opinion that man is a result of his heredity and of his environment, and that his activities are controlled by his responses to stimulations coming from his tissues, including particularly the glandular and nervous systems. This conception is presented by Dr. George A. Dorsey in his analysis of the distinctions between man and other living animals.

Dr. Dorsey begins his study with a survey of the evolutionary conception of life, telling the facts in a simple, direct style, comprehensible by any one with a high school education. He passes then to a consideration of infection, and of the relation of the endocrine glands to body disorders. His final section deals with human behavior and with the newer psychology. He is not misled by theories, but is constantly guided by conservative opinion and established facts. Moreover, like the true scientist, Dr. Dorsey has not hesitated to call in consultation, but has submitted each of the chapters of his book to a recognized authority in the field.

The text of this most fascinating outline of the modern science of life and living bristles with philosophical aphorisms. It has the type of striking comment that has made popular the pseudoscientific nonsense promulgated by Arthur Brisbane, but is, in contradistinction, scientifically sound. "Life," says Dorsey, "is a spendthrift breeder," and he discusses with many examples the vast wastage in the process of reproduction. A few other examples follow:

"When they (people) realized that they could not count on Darwin for a Personal Fitness certificate, they lost interest in evolution and blamed Darwin for having taken them in."

"The first business of sex was to put new energy into life, to release life, to keep it young and flowing. Sex thus appears as one of the many adaptations whereby living beings could become more highly organized and so carry on a higher scale."

"Bacteria are so small that almost nothing of their anatomy is known but their shape, and that changes according to circumstances."

"We may be as old as our arteries —and so no good for digging a sewer; but we are also as young as our brains—and so, good where brains are needed. But when any vital system breaks down, the machine stops and we are dead."

Here is a volume which has had twenty-one printings in less than a year, and which has received the enthusiastic commendation of practically every recognized literary critic and author in our country. The information that it contains, if known to at least the majority of our people, would make us a far more intelligent as well as a much better educated nation.

M. F.

News *and* Views *from the Field of Health*

WHOOPING COUGH SCHOOL OPENED

A whooping cough school has been opened in Needham, Mass., for the benefit of children who have sufficiently recovered from the disease to continue their studies but who must remain away from school in order to protect the other pupils. This special school is held in a portable building on the hospital grounds.

PAINTER'S CHILD DIES OF LEAD POISONING

Lead poisoning is either industrial or accidental, but the report of one fatal case suggests that faulty personal hygiene may be the cause in either circumstance. One 16 months old baby died of lead poisoning because his father neglected to wash his hands or change his clothing.

The child's father was a painter who was in the habit of coming home for lunch without changing his working clothes. During the lunch hour he would play with the baby and fondle him, as any parent might. As a result, the child's clothes were frequently smeared with paint; the mother had to wash it off on a number of occasions, she said. The baby probably put his clothing in his mouth, a common act of children, and in this way the child ingested the lead and was poisoned.

Personal cleanliness is one of the most important factors in the prevention of lead poisoning, in the opinion of Dr. T. J. O'Brien, who reports this case in the *Industrial Hygiene Bulletin*. Personal cleanliness on the part of those handling lead or any other poison is a protection not only to themselves but to others, including their families.

VILLAGE OF TUBERCULOUS

The success of modern methods in absolutely controlling the spread of tuberculosis has been demonstrated in a village in England, according to a report in *The Journal* of the American Medical Association.

The village is entirely inhabited by tuberculous ex-service men and their wives and children. The men are earning their living at industries under the constant care of the medical superintendent. The remarkable feature of the experiment is that, although every householder is tuberculous, the disease is unknown among the children.

SCHOOL GIVES HEALTH REPORT CARDS

Health report cards are being used by the schools in Knoxville, Iowa, in connection with their health program, as reported in *The Nation's Health* by Superintendent A. J. Steffey. Deprived of the services of a school nurse, the teachers are trying to carry out the health work themselves by means of daily inspection of pupils and lessons on healthful living habits.

The health report cards show the child's weight each month, the height twice a year and the results of the school physician's yearly examination. In addition, there are blanks for each month opposite the health habits that the children are supposed to perform. The parents are asked to check the habits they know the children have observed during the month and to sign and return the report card. In this way cooperation between home and school is obtained.

With the report is sent a letter calling the parents' attention to the report of the physical and dental examination and in case of any defects, asking them to sign one of three statements as follows: "I will consult a physician or dentist about this matter soon; I will not take care of this matter; I am not able to bear the expense of this work." Enclosed is also a health certificate for the physician or dentist to sign, showing that the necessary work has been done or is being done to correct the defect.

FEWER ACCIDENTS AMONG WOMEN WORKERS

The accident rate is considerably smaller among women in industry than among men, according to a report from the bureau of women in industry of the New York department of labor. Accidents to women constituted 7 per cent of the total number of industrial accidents in the state for one year, while only 25 per cent of those gainfully employed were women. Falls ranked first as causes of injuries to women.

MAKING BLIND BRAVERY UNNECESSARY

To protect the lives of firemen, courage and bravery must be guided by intelligence and knowledge, states a bulletin from the Industrial Commission of Wisconsin. As a result of periodic inspection of all buildings (except private residences), as required by law, firemen will know the hazardous conditions and dangerous manufacturing processes that may threaten their lives in case a fire occurs.

Open elevator shafts, weak walls, flues and vertical openings, dynamite, chemicals or other explosive substances all become sources of danger in case of fire. Accurate knowledge will enable the fireman not only to protect his own life, but to conquer the fire more quickly and surely.

Blind bravery, which has taken the lives of many in the past, will be supplanted by modern methods, as the automobile has supplanted the gallant, dashing fire horses.

WORK OF THE BLIND MEASURED

The House of Light and Work is the name of the first educational industrial center for the blind in Madrid, reports Antonio Las Heras Hervas in an address before the Second Pan American Red Cross Conference. An investigation carried on there proves that the amount of useful work that the blind can do is 50 per cent in manual labor, 75 per cent in industry and 100 per cent in general lines of work and organization.

Bureau of Aeronautics

MODERN KNIGHT

Clyde L. West is one of the soldiers who volunteered to be bitten by a yellow fever mosquito in Cuba in order to aid scientists in a study of the disease.

PLANE CARRIES WOUNDED

Ambulance planes similar to this one of the U. S. Navy were invaluable to the French in the recent Riffian war. Navy Day will again be observed on October 27, anniversary of the birth of Roosevelt, one of the chief promoters of an adequate U. S. Navy. October is also the month in which the American Navy was founded in 1775 by the Continental Congress.

Pacific and Atlantic

Pacific and Atlantic

CRIPPLES' ART

A young artist taught the crippled children of a Los Angeles hospital to make the objects of art they are displaying.

Pacific and Atlantic

WHEN A PIE WAGON FELL

These boys forgot to play the health game when they ate pies that had fallen in the street as a result of an accident to the wagon.

Pacific and Atlantic

EVEN MUSICIANS TRAIN FOR HEALTH

Good health is necessary for every line and this youthful orchestra leader and pianist trains strenuously to keep himself fit for his work. Daily exercise is part of his program.

Pacific and Atlantic

TENNIS STAR

Helen Wills autographed balls for these sturdy fans before a recent tournament.

EARLY DETECTION OF INFANTILE PARALYSIS

Probably no other acute infectious disease strikes as much terror in the hearts of parents as infantile paralysis. The dread of a child's being permanently crippled is readily understandable, says the Buffalo health department, and parents and physicians should be on the lookout for early symptoms of the disease.

It begins much like other infections, with fever, headache, constipation and vomiting in a previously well child. Within some hours there may be nervous irritability, tremor, sweating about the face, retention of urine, pain and stiffness in the neck region and perhaps pain and tenderness in the limbs. The patient has an anxious look. After three or four days of fever, paralysis of groups of muscles begins.

The most important phase of the treatment is rest from the very beginning. After paralysis has set in the paralyzed muscles must not be interfered with until every vestige of tenderness has entirely disappeared. The limb should be kept warm and at rest but no manipulation or rubbing should be done. Only after all pain and tenderness are gone can muscle training and manipulation be safely resorted to, and for this orthopedic advice should be sought.

THE HEALTH OF THE SCHOOL TEACHER

While the medical care and treatment of the school child has progressed enormously in the last fifteen years, little or no consideration has been given the teacher's health. Persons who are below par physically, who are weak, ill, depressed or tired, are not fit companions of youth, nor have they the energy requisite for teaching.

"We have as much right to demand physical fitness as intellectual and moral fitness," declares Prof. Frank Smith of Armstrong College, England, writing on the health of the teacher in *The World's Health*.

Aside from the benefit to the child and the teacher, good health in the teacher is an economic saving to the community. Industry has found that money was saved when the health of employees was examined and improved. School teachers are exposed to no occupational hazards, compared to those found in industry and have comparatively easy hours and conditions of work with long holidays for rest and recreation. Besides that, they are a selected class. One would naturally expect to find among them less time lost because of illness, but such is not the case.

Teachers in the London schools showed an average loss of 7.3 days annually for each teacher. In the state of Illinois, there was a loss of 6.6 days annually for each teacher, involving a loss to the educational system of more than $1,000,000 in salaries, according to a report from the state health department. In England, the rate of sickness based on over 12,000,000 workers for eight years shows an annual loss of 5.2 days for each man and 6.7 days for each woman.

Improvement in the condition of teachers' health and consequent economic saving in the state may be made along the same lines that have been adopted in industry. Physical examination of all applicants for positions, with a high standard of fitness, is the first step. In the normal schools physical examinations are usually made at entrance and upon leaving, but less than half the teachers go to normal schools.

Improvement of working conditions is the second step to be made in improving the health of teachers. The time lost by teachers is usually due to minor ailments, particularly pulmonary, bronchial, throat, nervous and mental complaints. Smaller classes in more hygienic schoolrooms, with especial attention to light and ventilation, have been advised to overcome these minor complaints. The additional expense should be more than offset by the improved quality and efficiency of the teaching and by the saving in lost time due to illness.

WHOOPING COUGH CLINIC ESTABLISHED

The response to the whooping cough clinic recently established in Syracuse, N. Y., has been gratifying, according to a bulletin from the city health department. Various types of treatment are being given and laboratory facilities for diagnosis in doubtful cases will be available. All cases are to be carefully investigated and followed.

For purposes of study the various cases at the clinic have been classified in three groups. The first is the group of contacts, patients who have not yet developed coughs but who have been exposed to the disease. Prophylactic injections of whooping cough vaccine will be given them.

Early cases with cough but without the characteristic whoop comprise the second group. History of exposure and examination of blood or sputum cultures will be used to aid in diagnosis and treatment will be given accordingly.

In the third group, in which the typical cough and other symptoms are present, every effort will be made to find some means of shortening the course of the disease and of relieving the suffering. In all groups the hygiene and general physical condition of the child will be given careful consideration, with particular attention to infants with rickets or tetany. Every effort will be made to encourage prompt reporting, and to this end inquiry will be made to ascertain whether a physician has previously been called and the case reported.

Helping the Negro Child to Be Healthy

A STUDY of the mortality statistics of white and colored children in the registration area of the United States from 1916 to 1922 fails to suggest any deterioration on the part of the negro race, say Drs. Knox and Zentai in the *American Journal of Public Health*.

Owing to poor environmental conditions, the infant death rate is still markedly higher than the average for the white race, but it is declining even more rapidly than is the death rate for white infants. The authors conclude that although the data at hand are insufficient for any broad generalization, they would seem to indicate the following facts:

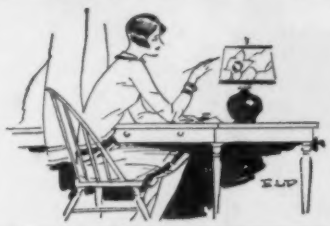
There is no marked physical inferiority inherent in the negro race.

Under similar economic and social conditions, the negro infants are born and reared as safely as are white children.

The excessive morbidity and mortality rates among negro infants are due to conditions that are a menace to the whole population, white and black alike.

Every effort should be furthered that helps in improving the physical and economic condition of the negro.

For unless this is done, the average standard of public health for white as well as negro will remain unsatisfactory.



Questions *and* Answers

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed.

Eyeshades à la Helen Wills

To the Editor:—What is your opinion of an article appearing in a newspaper which reads as follows: "There is danger in those eyeshades for Helen Wills and all her male and female imitators. They shut off light that is a necessary and healthy stimulus for the eyes, in the opinion of the president of the State Society of Optometrists."

E. R. B., Ohio.

Answer.—Helen Wills and other tennis players wear eyeshades because they see better and are more comfortable with the glare of the sun shut out or reduced, and the shades are safer than colored glasses would be.

A disagreeable glare is not a healthy stimulus for the eyes and is in no sense necessary.

Alcohol Used for External Purposes; Measly Pork

To the Editor:—1. What are the ingredients of alcohol that is used for external purposes? Is it all right to use in diluting iodine? Can it be used to cleanse a hypodermic syringe without using sterile water afterward? 2. What is the cause of worms in pork, and how do they affect one who has eaten the meat?

E. L., Kansas.

Answer.—Alcohol used for external purposes is denatured by the addition of wood alcohol, phenol or some other ingredient that renders it unfit for drinking. It can be used to dilute iodine. If used to cleanse a hypodermic syringe, the syringe should be washed out with sterile water afterward.

As to the question about worms in pork, we presume the inquirer is speaking of what is called measly pork. These worms are the embryos of tapeworm and get into the meat because the pig eats garbage or soil contaminated with human excrement containing segments of one of the tapeworms. The segments are dissolved in the stomach liberating the cysticerci, or larvae; these penetrate the walls of the stomach, are carried by the blood to the muscles of the pig and there become encysted.

When measly pork is eaten by a human being, the larvae are liberated during the process of digestion of the meat and one (sometimes more) attaches itself to the mucous membrane of the bowel and develops into a pork tapeworm (*Taenia solium*). The pig is called the intermediate host for this parasite.

Removal of Cataract

To the Editor:—Since childhood I have been bothered with a cataract in each of my eyes. The one in my left eye is so pronounced that I have never used that eye and can only discern the vague outline of an object. The one in my right eye is not very large or opaque, enabling me to see fairly well out of that eye, enough so that I have been able to graduate from high school. I have been under the impression that the removal of cataracts was a dangerous operation and so have never had it done. Do you think an operation is advisable? I am also extremely near-sighted. Will the removal of the cataracts have any effect on near-sightedness? Is the Abrams method good for treating weakness of eyes, and the Bates method good for treating near-sightedness?

C. L., Arkansas.

Answer.—An operation for cataract, when done at the proper time by a skilful oculist, is not dangerous. It is one of the most satisfactory operations in surgery. The total removal of the lens is usually best, but no one can determine whether the cataract in a particular case is in proper condition without an examination of the patient.

Glasses will have to be worn after the removal of a cataract and these are adjusted so as to correct near-sightedness.

Neither the Abrams method, which has been exposed as a complete fraud, nor the Bates method is approved by competent oculists.

Neuritis

To the Editor:—Is there any permanent cure for neuritis? Would you advise chiropractic treatments for this ailment? Is there anything that one may use externally that will relieve the pain?

R. D., Oregon.

Answer.—Neuritis is usually the result of some infection, of some poison or of some injury. The best method of curing the disease is to find and to remove the cause.

Rest and external heat are among the remedies that are most effective in bringing about relief and cure.

We should most emphatically not recommend chiropractic manipulations. They are much more likely to aggravate than to relieve the symptoms.

Physical Education Problem

To the Editor:—Though I have a perfectly healthy and sound body, I have always lacked almost all kinds of exercise and training. Being 38 years old, I want to make up for this before I am too old. I want an all round, intensive physical training, and I am willing to spend from six to twelve months for this purpose. I should like to be out in the country and not too far from Detroit. I cannot pay a large amount of money, but could work for the treatment. Can you advise me where such a place is available to one of my limited financial resources?

H. C. O., Michigan.

Answer.—The decision to spend several months in physical education is probably prompted by articles and advertisements in such journals as *Physical Culture*, in which it is represented that highly developed muscles are synonymous with perfect health. This is not the case, and most people who conduct physical culture institutions carry the matter to a great extreme. Some articles on attempts to exploit the public's interest in health appeared in HYGEIA some months ago under the title of "The Big Muscle Boys."

Daily exercises, especially outdoor exercise, for the purpose of developing the muscles and promoting bodily vigor are desirable, but the matter can be easily overdone. Exercises for special pur-

poses to meet special conditions are often prescribed by a physician, but should be carried out strictly according to his instructions.

A good place to get physical training is at a Y. M. C. A. gymnasium, of which there is at least one in Detroit. These gymnasiums are in charge of physical culture experts, who, as a rule, are quite competent. The fee is moderate and every facility in the way of appliances, including a swimming tank, are provided.

As a rule, outdoor exercises in the form of games and sports are much more promotive of general good health than are the more formal gymnastic exercises. Golf, tennis, swimming, rowing, fishing and hunting, all are excellent for the purpose of developing the muscles and promoting bodily vigor.

Blood Differences of White and Colored Races

To the Editor:—I am studying a subject that makes it necessary for me to know whether the blood of the colored races, such as the negro, the Japanese, and the Chinese, differs from that of the white man. The blood of the white man differs from that of animals in such a way as to indicate a different genus. Does the blood of the colored man differ to the same extent, or in the same way, from that of the white man? Or, does the blood of the colored man more nearly resemble that of the animal than it does that of the white man? I am told that as to compatibility (according to laboratory tests), there are four groups of blood among white persons. Does the blood of the negro (or other colored person) differ to such an extent from that of the white man that an examination and analysis of the blood of both would reveal to one ignorant of this identity which is the white man and which is the colored man?

E. T. S., Missouri.

Answer.—Investigations of the blood groups in the human race show that all human beings contain within their blood certain principles that react in such a manner that the red blood corpuscles of one person may or may not be agglutinated by the serum of another. This character of the blood is permanent throughout life.

According to a treatise recently published in Germany, various races differ as to the proportion of persons falling into various groups. The evidence is not yet sufficiently exact, however, to warrant the statement that one can use this method to distinguish between the blood of different races of man.

In questions of paternity, the test may be important, although not conclusive. It has already been recognized by the German courts. According to Schiff and to Ottenberg, it is possible by tests of the mother and of the children to draw certain definite conclusions as to the relationship of the father in about one fourth of the cases examined. It is pointed out that such blood tests are used in connection with other evidence and are not considered in themselves conclusive.

Children's First Teeth

To the Editor:—Some time ago my 3 year old daughter developed a swollen face. At the time of the swelling she was taken to a dentist. On examination the dentist declared that the swelling was due to an abscessed tooth. A lower molar did show a small cavity directly in the center of the tooth. The child never complained of a toothache. On the advice of the dentist, the molar was immediately extracted, and the swelling disappeared within twenty-four hours. Since the removal of this tooth a cavity has appeared in another molar. Can such a cavity be repaired, or must the tooth be removed? The dentist advises as follows: "If the nerves are exposed the tooth must be removed. If the decay has not advanced to this stage, then a temporary (cement) filling may be had." I am at a loss to know exactly what should be done in such cases. I have often heard it said that when a child's tooth (especially a molar) is extracted, nature does not provide another when the second teeth are due. The arguments to substantiate this statement were to the effect that when a child's tooth is extracted, such an extraction destroys the root and closes the socket in the jaw bone, preventing the growth of a second tooth.

J. A. Z., Illinois.

Answer.—The baby teeth, especially the molars, should be watched carefully for the first indication of a cavity. If they are filled early with such a material as the black phosphate of copper cement, the tooth is usually saved from further trouble. It is very unusual for a temporary molar to become abscessed at 3 years of age.

The baby molar with the cavity should be filled. It is not always necessary to remove the tooth because the pulp (nerve) is exposed; it usually can be treated and filled, and whenever this is possible it should be done. If this child's teeth are decaying at 3 years of age, she should be taken to a dentist often so that the first indication of decay may be promptly treated.

The removal of a temporary tooth does not prevent the development of a permanent one, but it often disturbs the arrangement of the permanent ones, making it difficult or impossible for them to come in the position in which they belong and forcing them into abnormal places. In other words the too early extraction of temporary teeth is one of the commonest causes for crooked and irregular teeth.

The fact that another tooth will come in is not sufficient reason for extracting temporary teeth. For instance, this baby molar that was extracted at 3 years will leave the child for at least six years without that tooth for masticating; in that time the tooth should have been keeping the place in the arch for the permanent tooth that was to follow it. In short, baby teeth should be filled whenever a cavity appears. It is possible to treat and fill teeth after the pulp is exposed, but it is not always justifiable.

Osteomyelitis

To the Editor:—Please tell me about osteomyelitis, its causes, symptoms and outcome. When the drainage continues over a long period of time, does the bone ever become tuberculous? Does continued drainage indicate continued destruction of bone tissue and marrow? A child of 13, in whom I am greatly interested, was suddenly taken ill with pain above her knee cap, and the surgeon made the diagnosis of osteomyelitis. She was operated on within thirty-six hours the last week in May. There is a great deal of drainage still, and she has an increased temperature at times. Her pulse stays around 100 or less if she is quiet. Her appetite is good now and she eats nourishing foods, but is getting very thin. She is bright and interested in everything and not as nervous as she was the first few weeks. As long as the drainage is good, will there be any necessity for another operation?

C. M. V., Nebraska.

Answer.—The usual cause of osteomyelitis is infection of bone by pus germs. These germs are carried to the bone in one of three ways: by direct penetrating injury, as after an open fracture; by extension from a nearby abscess, as in a joint, and, most commonly, by the blood stream. The patient may have an acute infectious disease like scarlet fever or measles or have tonsillitis or a cold with pus running from the nose. Even a boil on a distant part of the body may furnish the germs that get into the blood and are carried to the bone.

The outcome is first the death and then the destruction of the infected bone, which, being solid and rigid, cannot react well to the intense inflammation set up. The blood supply of the bone consequently is cut off and a portion of the bone of varying size may die. The pus finally gets out by burrowing a hole to the skin, or it is let out by the surgeon. Some dead

bone usually remains behind, even after early drainage. This dead bone requires a long time to soften and to be melted away by the action of the pus, and it keeps up the discharge. Such cases may persist for years, even a lifetime. This acute type of osteomyelitis does not become tubercular. Tuberculous osteomyelitis is a separate form, coming from tubercle bacilli floating in the blood, generally from a focus in the lungs or lymph glands. It is more chronic.

This child has now passed the acute stage of osteomyelitis and has entered the chronic stage. There is probably some dead bone in the thigh, which keeps up the discharge, or the drainage after this length of time has become inefficient; that is, it may be blocked so that the discharge backs up.

The infection may clear without another operation, but probably it will not. Before another operation, an x-ray film should be made to determine the presence or absence of dead bone, called a sequestrum. This sequestrum may be completely enveloped in newly formed bone that has grown around it since the onset of the infection. The new bone is called the involucrum. At the operation the involucrum is cut into with a chisel widely enough both to remove the dead bone sequestrum and to permit free drainage so that no retention pockets will form.

The sooner an efficient operation is performed the quicker the child will return to health. If the condition is not relieved, the child will suffer from absorption of the products of the inflammation and thus lose appetite, weight, strength and resistance.

Food and Hardening of the Arteries

To the Editor:—1. I read in a recent advertisement that cereals, which form the staple item of most breakfasts, cause acid, which tends to harden the arteries. This idea also appeared in a report of the last convention held by osteopaths. If this opinion is correct, do all cereals come under the ban? 2. I have frequently heard opinions to the effect that only the yolks of eggs should be eaten, as the whites are composed of albumin and are therefore injurious to the kidneys. Is this so? 3. What can be taken with milk to render it not constipating?

E. M. F., Connecticut.

Answer.—1. The foods that are set down as acid-forming are those containing a considerable percentage of protein. These include meats, fish, eggs and the cereals. Most vegetables are base-forming, and these include also legumes, such as peas and beans, which have a high protein content. This does not mean, however, that any of these foods are not wholesome or that with a normal individual they should not constitute a reasonable proportion of the diet.

2. Egg albumin is not objectionable to the normal person and does not tend to promote diseases of the kidneys.

3. Milk is not constipating in itself. It is so completely digestible that when it is the sole article of food, lack of bowel movement may result from lack of roughage. When green vegetables, fruits and the coarser cereals are included in the diet in reasonable amounts, milk is a most wholesome and valued food.

Harelip, Cleft Palate and Extra Vertebra

To the Editor:—I am the father of twin daughters, 19 months old. One was born with harelip and cleft soft palate. The lip has been corrected, and we are to have the palate corrected. She has one vertebra, near the hips, that has not closed as yet, according to an x-ray photograph. This at first caused a knot to form at her spine at the location of the defect, but this has disappeared entirely and her back is apparently normal and perfect, except that the x-ray shows this one vertebra not yet closed. The other twin was born with an extra vertebra at about the sixth or seventh rib, and it has made her ribs bulge on one side of her back. Her shoulders and hips are square. The deformity was not noticed until she was 4 months old. For the past year it has seemed to get neither better nor worse. A physician who took an x-ray picture of her spine says there is nothing to do to correct this and that if she is always in as healthy a condition as she seems to be at present, there will be no trouble resulting. The deformity is not noticeable when the baby is dressed. Shall we try to have it corrected, or watch closely to see that it gets no worse? W. M. B., Maine.

Answer.—Such defects of development as are described in the child with harelip and cleft palate, in whom there was for a time the failure of one of the vertebrae to close, are quite frequent. They are the result of failure in the process of development of the two halves of the body to come together in the midline. The result of this is a cleft in the palate or in the vertebral column. In harelip the defect is usually at one side of the midline. The child is fortunate, indeed, that the opening in the back has closed. This opening is sometimes quite large, with a protrusion of the spinal contents and is then a serious defect called spina bifida.

Concerning the child with the extra vertebra, your doctor seems to have given you sound advice. Nothing should be done except to watch the development of the child, postponing any surgical or other procedure unless the condition interferes with the health or movements of the child.

Micrococcus Tetragenus

To the Editor:—I should appreciate any information you can give me on the organism *Micrococcus tetragenus*. Is there a cure for such an infection?

E. A. S., Arizona.

Answer.—The *Micrococcus tetragenus* is frequently found in the sputum from persons with pulmonary tuberculosis. It kills white mice, but affects other mice and rabbits to a slight degree. In human sputum it is usually not considered to have much significance, being only a secondary invader, which has nothing to do with the disease present. In a few instances it has been said to cause abscesses in man.

Underweight

To the Editor:—Do things other than diet have an effect on weight? I have tried several times to gain weight, unsuccessfully; once for six weeks under the direction of a dietitian. I am 5 feet 7 inches tall and 23 years old. My usual weight is 121 pounds; now I weigh only 112½. Last year, before my baby was born, I weighed 139 pounds and was in good general condition. My parents are both thin, though their families show no predominace to either leanness or obesity. I am of a nervous disposition. I fear my posture is not any too good. R. U., New York.

Answer.—There are things other than diet that have to do with weight. Some people are born to be thin, and this is especially likely to be the case when the history shows the members of the immediate family were so inclined.

The average weight for a woman 5 feet 7 inches in height at the age of 23 is 138 pounds, according to the tables used by the insurance companies.

In all probability, the nervous disposition and the tendency to worry are important factors in failure to gain in weight. The only way to stop worrying is to stop. It is much easier said than done; but it is often possible if one determines to control the tendency.

As to whether posture has anything to do with weight and the other troubles mentioned, a physician may be able to say after a personal examination.

CO-OPERATE WITH YOUR DOCTOR TO PROTECT YOUR FAMILY

Clear-eyed, light of heart and step they swing along, the fortunate children of America. Is there anything that parents would not do to keep them strong and well, to save them from the more serious diseases of childhood?

Keep Their Lithe Young Bodies Straight and Strong

A few facts about a valuable aid to growth and development

COD-LIVER OIL

THE distressing thing about rickets and other diseases associated with malnutrition is that they creep upon a child so gradually that often the parent is unaware that the child is not getting the nourishment he needs until marked symptoms appear, such as spinal curvature, bow-legs or knock-knees.

That is why periodic examinations by a physician are recommended. The doctor can often detect a tendency toward malnutrition and take immediate steps to build up bodily vigor and resistance.

Fresh air and sunshine, plenty of rest and sleep are insisted upon. A properly balanced diet is laid out and commonly the regular taking of Cod-Liver Oil is suggested. The child gets vitamins from wholesome food, especially the water-soluble vitamins "B" and "C" from grains, green vegetables, and ripe fruit, but the most abundant source of the fat-soluble vitamins "A" and "D" is Cod-Liver Oil.

Vitamin "A" is essential to proper growth and development, and increased resistance against colds and other debilitating infectious diseases. Vitamin "D" is of inestimable service in the prevention of rickets, in promoting the normal development of the teeth, and in preventing tooth decay.

As your physician knows, every bottle of Parke, Davis & Company's Standardized Cod-Liver Oil bears a statement which no other cod-liver oil on the market bears, as to the number of units of *both* Vitamin "A" and Vitamin "D" contained in each fluid-ounce of the product.

Children and adults will be surprised to find how remarkably free this product is from the objectionable flavor of impure cod-liver oil. Almost any one who needs cod-liver oil can be readily persuaded to take it.

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IF YOU are troubled with Excessive Armpit Perspiration, we are prepared to prove that you can be free from this annoying and embarrassing condition. By the use of NONSPI (a free sample of which we will furnish, if you wish) you can protect your personal daintiness, avoid armpit odors and save costly dresses from ruinous perspiration stains.

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Wonderful NONSPI (*a pure antiseptic liquid*) approved by high medical authority both in this country and Europe—prescribed by numerous physicians—used by more than a million women—and sold and recommended by toilet goods dealers and druggists everywhere.

We urge that you give NONSPI just one trial! And in asking you to do so, it is our honest opinion, that if those of you who read this advertisement, and who are troubled with Excessive Armpit Perspiration—*because you have not as yet used NONSPI*—could realize the comfort and freedom afforded to the women who *have* used it, there is nothing which could keep you from either purchasing a bottle at once (the price is but 50c) or sending to us immediately for a liberal FREE SAMPLE.

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EYE DEFECTS IN CHILDREN

Few persons are aware of the frequency of eye defects in infants and children. Many of these defects escape detection until the child has reached the school age. By that time the damage to vision may have become permanent.

Dr. W. Oliver Lodge of Bradford, England, has recently called attention to the importance of this matter. Many of these visual defects, says Dr. Lodge, are hereditary; some improve, a few remain stationary, and others become worse. Many older children find their preparation for attractive careers arrested owing to processes that might have been foreseen, if not prevented.

Bishop Hamon, in a careful examination of the eyes of 368 London school children between the ages of 4 and 7, found that in 35 per cent there were present such high errors of refraction that medical attention and some modification of the educational regimen was necessary. Some eye defects such as congenital cataract or squint are generally recognized by the parents quite early, but others such as near-sightedness, far-sightedness or astigmatism remain undiscovered until the child enters school and receives a careful visual examination by an oculist.

It appears at present impractical to secure the expert examination of the eyes of every infant or to require the wearing of glasses by one third of all young children. Parents and teachers, however, should be acquainted with the fact that defects of vision are present in a large number of children, that many of these defects tend to become worse and in some cases beyond remedy, and that they are often responsible for failure to get on in school.

If these defects were discovered and corrected before the child begins such use of the eyes as school work demands, it would be the means of saving many children from failure in school, and, what is more important, of arresting further deterioration of sight.

The teacher's careful observation of an otherwise normal child who is unable to keep up in his school work should lead to an examination of his visual acuity whenever possible. When such correction is not possible or until it has been effected, the school work should be so planned as to enable him to accomplish it within his visual limitations.

In the last ten years the number of married women in manufacturing and mechanical industries has increased 41 per cent.

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CEREALS are valuable sources of energy. Nourishing, economical and delicious.

Kellogg cereals are particularly valuable. Made from the most carefully selected grains. Manufactured under the highest standards of cleanliness. They furnish fuel for active bodies and keep them in correct physical trim—fed but not overfed. And every hygienist knows that means enthusiasm for work and play. Freedom from that dull, heavy feeling.

As a part of its health service the Kellogg Company offers pamphlets on **overweight, underweight,** anemia and **constipation.** This material also embraces menus and meal suggestions which will be found very helpful in your health project work.

Graphic exhibits showing the processes of manufacture in the making of Kellogg's Corn Flakes, Krumbles and ALL-BRAN will prove of interest.

Write us for this material.

KELLOGG COMPANY, Health Service Dept., Battle Creek, Michigan

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Just by adding water, you turn KLIM to sweet, whole milk, with all the cream in it, just as it came from the cow—milk that is a wholesome refreshing beverage; a rich cream for coffee; a perfect food for growing children; for camping, for cooking and baking.

Use KLIM in your cakes and puddings; mix KLIM double strength as cream for your coffee; or give it to the youngsters as a food.* Once you learn of the wonderful qualities of KLIM you are going to find use for it repeatedly.

Don't put off the discovery of KLIM. Clip the coupon and send 10c. in stamps, today.

*Consult your physician regarding the proper use and modification of KLIM for baby feeding.

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HYG. Oct.

FOOD HABITS OF ANCIENT HAWAIIANS STUDIED

Although they had no milk, no cod liver oil and no whole grains, the ancient Hawaiians must have eaten food of high nutritive value and it must have constituted what is now considered an adequate diet, judging from the fine stature of the race, says Miss Carey D. Miller, nutrition expert of the University of Hawaii.

Heredity undoubtedly influences the stature and build of a people, but students of nutrition assert that fine stature in a race or an unmixed group of people is due to good food over a long period of time, while poor physical makeup is due to poor food for many generations.

The diet of the Hawaiians included 138 kinds of edible fish, thirty-one fowls, breadfruit, ferns, bananas, yams, taro, poi, pandanus and various types of seaweed.

FIRE PREVENTION WEEK IS OBSERVED THIS MONTH

"More than 15,000 lives are lost each year by fire. Safeguard your family and your home by being careful," advises the National Board of Fire Underwriters in calling attention to Fire Prevention Week, to be observed from October 3 to 9. Business organizations, public officials, fire departments, schools, theaters, churches, newspapers, civic organizations and Boy and Girl Scouts can aid this movement to cut down the frightful losses due to fire.

"If you break every match between your fingers after you have used it, you will never throw a lighted match away. Millions of dollars in fire loss can be avoided by smokers who observe this simple safety precaution and make a habit of it," reads a fire prevention cartoon from the Atlantic Refining Company.

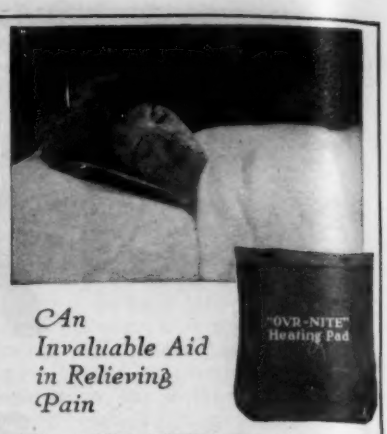
Fires occur in American homes at the rate of 618 every twenty-four hours, a fresh outbreak every three minutes. At least three out of four need not start, for they are due to public carelessness and ignorance, both correctible. The National Board suggests the following slogans for display in theaters and schools:

"Dynamite used as a rolling pin is as safe as cleaning with gasoline."

"Clean your chimney and avoid a stack of trouble."

"A child and a match are a dangerous pair: two little heads without a care."

"A cigar or cigarette butt may be down but it's not always out! Stamp on it!"



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There is no possibility of leakage with the "OVR-NITE" Heating Pad. It stands the test of usage and age. 120 hours' heat guaranteed.

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Be sure of

Healthful Cleanliness

in the kitchen

Wherever food is prepared and kept, *healthful cleanliness* is of vital importance. Cooking utensils, aluminum, enameled ware and glass, etc., used in preparing food for the children as well as the grown-ups must be hygienically clean and sanitary to preserve the wholesomeness of the food.

Old Dutch assures healthful cleanliness; removes all visible dirt, stains, discolorations and also invisible impurities. It doesn't scratch; this is important, as scratches are catch-alls for dirt and impurities and make food more readily stick to the pan.

For the sink, table top, cabinet, stove porcelain, enamel and all smooth surfaces, Old Dutch is the ideal cleanser. It removes dirt, grease and grime and preserves the surface. Old Dutch will not clog the drain.

Old Dutch is composed of a natural detergent; free from harsh, scratchy grit, acid and caustic. To the eye a fine powder—the microscope shows that its particles are flaky and flat shaped. They remove all uncleanliness by erasing it.

There is nothing else like it

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DIGESTIVE DISORDERS IN CHILDREN DUE TO PSYCHIC FACTOR

A familiar picture is that of the difficult or sickly child and the anxious mother who talks volubly about him in his presence. The child in these cases usually shows considerable pride in his shortcomings; as one authority puts it, he has a reputation to live up to. Especially is this the case with children who have no appetite and will not eat, a very frequent complaint among children.

The psychic factor is generally responsible for lack of appetite, thinks Dr. John F. Scott, writing in the *Atlantic Medical Journal.* In some cases, defective control on the mother's part is the reason for the child's refusing to eat. Such children are hard to treat in their home environment, but respond readily to group treatment, when the psychology of the crowd and the common ideal can be exercised.

Excitement and fatigue are other causes of lack of appetite. Children who are normally good eaters may lose their appetite in anticipation of a trip or a picnic, in fear of missing some important event or in fear of some unpleasant thing that is about to occur. Homesickness may also cause loss of appetite.

Of course, the appearance of the food served plays a large part in stimulating or retarding the child's desire, as children have an innate fastidiousness, which is not always considered. Prolonged use of the nursing bottle may be another factor, thinks Dr. Scott. Sucking anything gives the child a certain gratification other than that which comes from a well filled stomach, while the appetite for solid food becomes blunted and the child refuses to eat. For this reason the bottle should not be continued after the first year.

In all these cases of psychic disturbance of digestion, the environment plays a large part. The influence of parents, even though well meaning, is not always for their children's good. If the mother is overtired or worried, or if she is impatient and irritable by temperament, she cannot help being hasty with her child and he will reflect her mental unrest. A calm, harmonious atmosphere is essential for the child's proper development.

Suggestion may be employed very effectively, especially in overcoming negativism in children, advises Dr. Scott. Suggestion may make a thing agreeable or unpleasant. Often it is better to suggest a thing than to give a direct command.

SCHOOL TELLS HOME OF COMMUNICABLE DISEASE

In an attempt to secure the cooperation of parents in preventing the spread of communicable diseases, the school health education department of Denver is sending home with each child in a room in which a contagious disease has broken out slips somewhat as follows:

"A case of diphtheria from your child's schoolroom has been reported. This is not a cause for alarm. It is probable that only a small per cent of the children in the room have been directly exposed. Not all children, even though exposed, contract the disease. A culture from your child has been taken by the school nurse. If this culture should prove positive the city health department will notify you. This notice is sent to you in order that you may watch your child and begin treatment at the earliest possible moment."

A description of the symptoms and incubation period of diphtheria is given and the notice concludes with the following paragraphs:

"If your child shows any of the foregoing symptoms, keep him at home away from other children and call the family physician at once. The earlier a child with diphtheria receives antitoxin the greater the chance of recovery.

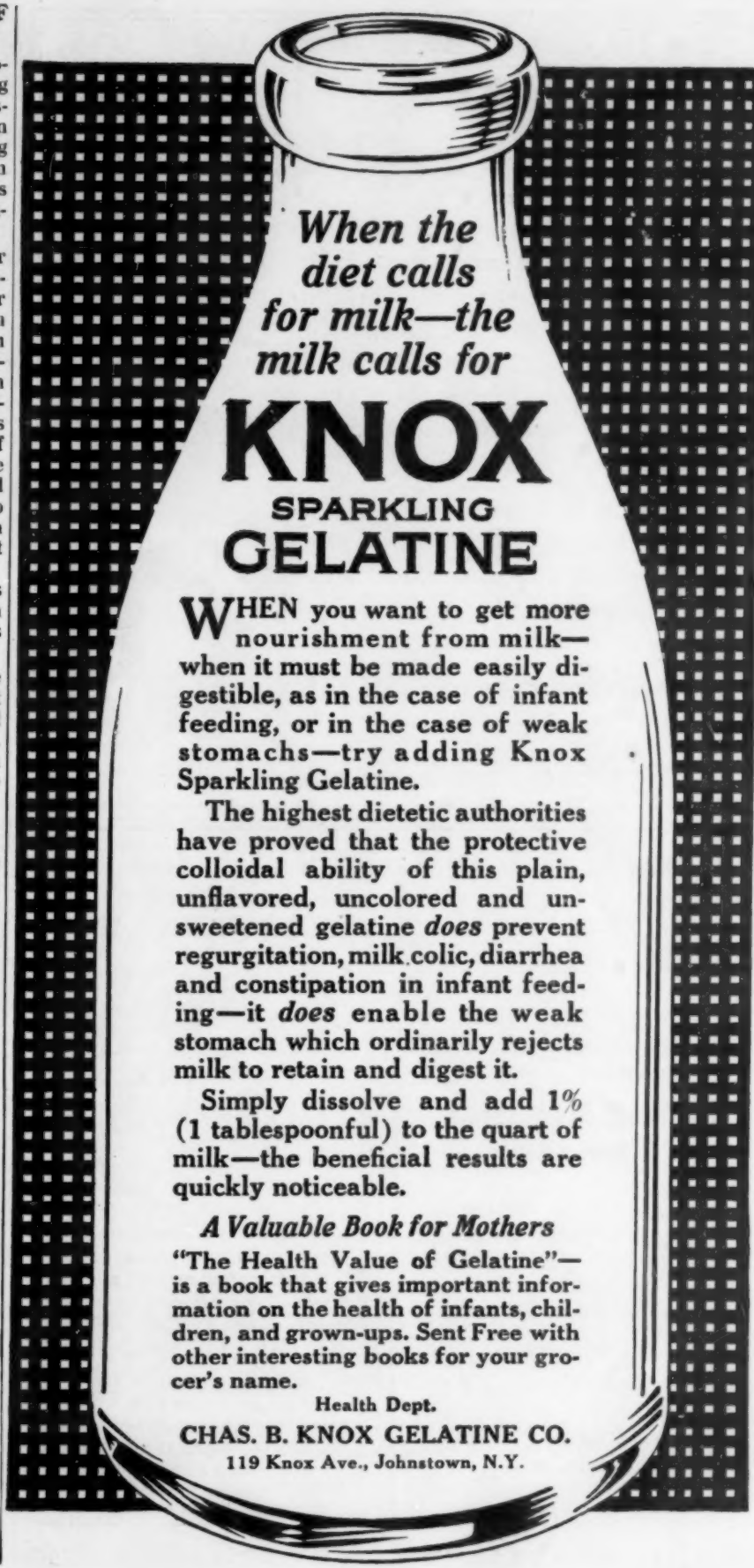
"A medicine (toxin-antitoxin) can be given the child, which will prevent his taking diphtheria for the rest of his life. This medicine is injected under the skin in three small doses seven days apart. It leaves no scar or permanent after-effects. Ask your family physician or the school health department about this treatment.

If your child complains of a cold or sore throat, call the family physician and have a culture taken."

DANGERS IN CROSSING OF RACES ARE SOCIAL

The crosses between whites and North American Indians, while numerically unimportant, are instructive as a biologic and social experiment, according to Dr. W. E. Castle of the Bussey Institute of Harvard University. The chief danger of racial crosses is social, rather than biologic.

Studies of the half breed population that grew up along the frontiers shows that there was little evidence of physical or intellectual degeneracy except that due to the introduced vices of the whites. Since there is no strong racial prejudice based on social grounds against the red man, the full blooded Indian is rapidly disappearing.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SPARKLING
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WHEN you want to get more nourishment from milk—when it must be made easily digestible, as in the case of infant feeding, or in the case of weak stomachs—try adding Knox Sparkling Gelatine.
The highest dietetic authorities have proved that the protective colloidal ability of this plain, unflavored, uncolored and unsweetened gelatine does prevent regurgitation, milk colic, diarrhea and constipation in infant feeding—it does enable the weak stomach which ordinarily rejects milk to retain and digest it.
Simply dissolve and add 1% (1 tablespoonful) to the quart of milk—the beneficial results are quickly noticeable.
A Valuable Book for Mothers
"The Health Value of Gelatine"—is a book that gives important information on the health of infants, children, and grown-ups. Sent Free with other interesting books for your grocer's name.
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CORRECT posture promotes physical well being, upon which mental alertness absolutely depends. Notice the comparison of the two silhouetted figures at the right. These drawings are not exaggerated They show exactly how spine curves are affected by correct and incorrect posture.

Do/More Health Chairs are designed in accordance with anatomical principles which insure healthier, happier and more profitable hours for those who sit at their work.

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The ordinary chair allows the back to slump. Note the congestion of the body.

Support where support is needed. The Do/More Chair braces the body in an upright posture.

* *There are fifty-four Do/More models. Included in this group are specific models for school rooms. Send for illustrated literature.*

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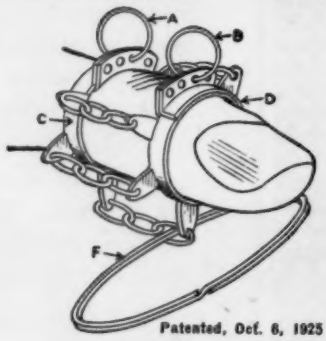

Patented, Oct. 6, 1925

DR. THOMPSON'S
ANTI THUMB-SUCKING RINGS

TWO little silver rings linked with silver chains so constructed as to break the suction, thereby correcting the habit in a simple, humane manner.

As these rings do not interfere with the child's normal activities, they can be left on until the habit has been permanently broken. Interesting brochure describing in detail the evils of this, the most pernicious habit of childhood, will be sent to any one on request.

Sterling Silver, Retail, $3.00. Solid Gold, $12.00

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Representatives Wanted—*Write Hygeia*

HOOKWORM DISEASE IN THE COOK ISLANDS

Hookworm disease, which afflicts a large proportion of the inhabitants of any community in which it is prevalent, has been the subject of investigation and attack in the Cook Islands of the South Pacific. The population of the whole group of islands is estimated at about 10,000. The stools of 1,003 of these were examined and 74 per cent of the adults and 68 per cent of the children were found to be infested. A single dose of the remedy used to expel the worms was curative in the cases treated.

Dr. A. M. Lambert of the International Health Board, who conducted this investigation, found that of the diseases prevalent among the natives, measles is usually fatal. Dysentery is common, but typhoid fever is unknown. Lockjaw is not infrequent. Rheumatism and yaws are common and tuberculosis is sometimes seen. Other intestinal parasites, especially Ascaris and Trichuris, are frequent.

The philanthrophic health agencies have extended their activities to the most remote inhabited portions of the world and are making life more healthy and happy for these uncivilized natives.

CLUB WOMEN PROMOTE HEALTH

Club women of Illinois have planned to unite their efforts for improvement in sanitation, health and prevention of disease during the coming year, according to a statement from the Illinois Federation of Women's Clubs.

In promoting public health and child welfare, the various clubs will decide which activity their community needs. Assistance in carrying out their programs will be given by the state chairman of public health and child welfare. Because of the close cooperation of four important agencies in the state—the federation clubs, the state medical society, the state dental society and the state department of public health—there is an opportunity for unusual achievement.

A plan for saving babies and mothers, a plan for preschool child examinations, medical inspection of school children, dental inspection of school children, control of diphtheria, adult health audits, and study and enforcement of health laws are the items specified in the prospectus sent to the individual clubs by the federation.

Too little of dollars, interest and time is spent in the purchase of health.—*Antioch Notes.*

HOUSING SHORTAGE AND MENTAL DISEASE

The housing shortage is considered by medical authorities in Berlin to be the direct cause of the increasing prevalence in that city of nervous disease and mental disorders.

All the cases that have brought about serious disturbances have occurred among people who before the war occupied their own houses or flats and are not accustomed to sharing their dwellings with others. In some instances tenants have killed others in a fit of mania, and many have become unduly depressed and insane, reports the Berlin Forensic Society. Physicians have had to cooperate with the authorities in cases of tenants' becoming unbalanced as a result of two or three families living in the same flat.

MANY TROPICAL DISEASES DUE TO FUNGI

Bacteria are not the only source of infection; over 20 per cent of the tropical diseases are caused by fungus growths, according to Dr. Aldo Castellani.

Every one is familiar with the type of parasitic plant growth that makes little scabs and scales on fruit and leaves of trees, although not every one realizes that it is such an important cause of disease in human beings.

Ringworm is one of these diseases caused by fungi. While the skin is most frequently attacked by these parasites, other systems of the body may be invaded also. Cooperation between medicine and botany will aid in studying these diseases in man and in finding a cure for them, Dr. Castellani thinks.

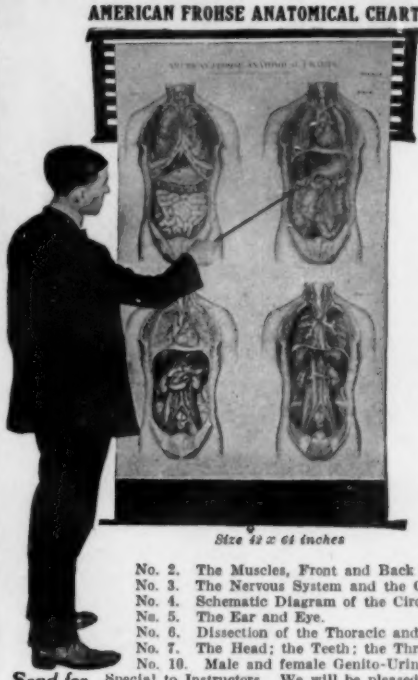
WORKING A WEAK MEMBER

His upright posture is one of man's proudest boasts, and yet it has not been acquired without coincident penalties. The pains and aches in the lower back to which mankind is so prone are one of the disabilities that accompanies the gain.

Mechanical imperfection, due to the change in position, is present at the junction of the pelvis and spine, first, because it is the meeting place of a fixed and a movable body and, second, because this is the junction of two curves—a forward and a backward one. Because on this joint rests the responsibility for transmitting the weight of the trunk, arms and head to the legs, it is no wonder that it sometimes gives way under the strain.

—*The Nation's Health.*

Do You Teach or Lecture?



Size 42 x 64 inches

Then you will need the American Frohse Life-Size Anatomical Charts, by Max Broedel, Johns Hopkins Medical School. They combine many features which make them valuable equipment for every person who teaches. Most important is their life-size illustrations and a slight exaggeration of natural colorations to bring out all structures with striking clearness. The charts show all of the structures of a given area which would be found by actual dissection of the parts. Even the smallest branches of arteries and nerves are clearly shown. For group demonstrations and quizzes and for general use in the laboratory or dissecting room Frohse charts are unexcelled.

The set comprises 35 life-size or larger figures (19 greatly magnified), which are lithographed on eight cloth-backed sheets.

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No. 5. The Ear and Eye.
No. 6. Dissection of the Thoracic and Abdominal Viscera, four stages.
No. 7. The Head; the Teeth; the Throat.
No. 10. Male and female Genito-Urinary Organs.

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The Good Health Elves.—17 to 25 characters. Set of 17 copies, $2.00. Single copies, 15 cents each.

The Trial of Jimmy Germ.—8 characters. Set of 8 copies, 35 cents. Single copies, 10 cents each.

The Friendly Brushes.—11 characters. Set of 11 copies, 50 cents. Single copies, 10 cents each.

The Magic Fluid (Diphtheria Antitoxin).—8 characters, with chorus, "king's subjects," etc. Set of 8 copies, 35 cents. Single copies, 10 cents each.

From Danger Valley to Safety Hill.—32 to 45 characters. Single copy, 25 cents.

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Health Posters

Reproduces in black and white about 200 posters in miniature, selected from the 4,492 submitted in a poster contest open to high school pupils of the United States. Cuts are 2¼" x 3". Well suited for all grades and types of schools. Single copy, 30 cents.

Poster Exhibit

Originals of the above posters are made up into loan exhibits of 25 posters each. Loaned to schools for $1 to cover packing and carriage costs.

PAMPHLETS

The American Medical Association has available a wide range of pamphlets and charts on disease prevention (typhoid, scarlet fever, smallpox, diphtheria, etc.), infant welfare, diet, exercise and patent medicines. Catalog free on request.

Free to Teachers

"How I Use Hygeia *in My Class Work"* was the subject of letters written by teachers in a prize contest. The best letters have been printed in pamphlet form. Copy will be mailed on request.

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HOW PARENTS CAN AID IN SCHOOL HEALTH

Parents can aid the health program in schools in the following ways, says Dr. Florence A. Sherman, assistant medical inspector for schools for the state of New York:

By believing in and having themselves at least once a year a health examination.

By seeing that children are trained early in daily health habits.

By having their children enter school physically fit.

By appointing the best and not the cheapest doctor for school service.

By responding early to notices of physical defects sent by the school doctor, by conference with the family physician or specialist.

By believing that the school doctor, nurse and teacher are friends, not foes.

By permitting sufficient removal of the child's clothing to make possible better examination by the school doctor.

By taking an active interest in the school health program.

By visiting school at intervals, knowing the teacher, and noting the sanitary condition of the building.

By insisting on clean, wholesome buildings and healthful equipment.

SAFETY DRIVE IN INDUSTRIAL PLANT

The system by which one industrial concern, employing 15,000 men, reduced their lost-time accidents 41 per cent and minor accidents 37 per cent is described in a recent number of *Labor and Industry*.

All the employees, including the office force, are organized into groups of six under a safety leader, the men in each group being chosen because of proximity at work. The safety leaders are organized in groups of twelve under captains, who report to department superintendents. Each day the safety leaders also make out a report on a printed form. For those who cannot read English the report may be written in the leader's own language.

Lists are posted showing the number and kind of accidents of each group, and also of each individual. Each lost-time case is written up giving a description of the accident, the cause and the recommendation to prevent recurrence. This is sent to all departments as soon as written. Monthly meetings, buttons and badges are also used to keep up the men's interest in safety.

A tooth in the mouth is worth ten in a plate.

Try 10 Cups

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There is a coffee with the caffein taken out. Each lot is analyzed to prove at least 95% removal.

It is a pure coffee, a real coffee, a very delightful blend. All the flavor and aroma are intact.

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The result is coffee none need fear. All may drink without restriction. No one need turn to a substitute.

Millions of people have adopted Kaffee Hag—perhaps most of them on a doctor's advice. Every doctor can advise it. Every person can enjoy it, just as well as coffee with caffein.

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Mail this Today for 10-cup Sample; 10 cents!

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The intensive campaigns against diphtheria conducted during recent years throughout the country by various State and Municipal Departments of Health, have demonstrated that Toxin-Antitoxin will effectually reduce the number of cases of diphtheria; because it confers a high degree of immunity which probably will continue throughout life.

Toxin-Antitoxin is especially useful for general immunization of the following groups, except immediate contacts: (1) All children from 6 months to 6 years of age. (2) School children. (3) Adults whose daily work might expose them to diphtheria.

The attention of the family physician is called to the special advantages of immunizing children of pre-school age (group 1). These children represent the most susceptible group and their immunization would soon result in community protection.

Toxin-Antitoxin *(Lederle)* is supplied in packages containing one immunization and ten immunizations.

If your children have not been protected with Toxin-Antitoxin, arrange with your physician for the immunizing treatment.

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